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THIRD ANNUAL REPORT

OF

THE BOARD

OF

GAS COMMISSIONERS

OF THE

Commonwealth of Massachusetts.

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JANUARY, 1888.

BOSTON:

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A change occurred in the Board in May last, the chairman, Hon. Starkes Whiton, having resigned for the purpose of accepting an appointment as a Commissioner of Savings Banks.

In the year past there were 64 gas companies actively engaged in business in the Commonwealth. The Bay State Gas Company of Boston is not included in this number. The company reports that its works were started the 17th of December for the purpose of testing them, that a small quantity of gas has been made and sold to the Roxbury Gas Light Company, but that it is not making gas at the present time. The Clinton Gas Light Company, by special act of the last Legislature, was authorized to furnish gas in the town of Lancaster. So far as this Board is informed, the Dorchester Gas Light Company has taken no action under Chapter 372 of the Acts of last year allowing the sale or lease of its property. The owner of the gas works in Middleborough having died, the same have been purchased by W. B. Hammond.

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Light Company. Under Sect. 16, Chap. 314, Acts of 1885, this company has taken an appeal to this Board from the action of the Melrose Selectmen, which appeal is still pending.

The Amesbury and Salisbury Gas Light Company has, during the year, erected water-gas works and begun the manufacture of gas.

The following list shows the Gas Companies incorporated under the general law during the year, with the date of incorporation and the amount of the capital stock.

Equitable Gas Company of Springfield,	May 27,	\$250,000
Winthrop Gas Company,	Aug. 23,	50,000
Union Gas Light Company (Rockland),	Aug. 25,	15,000
The Gardner Gas Light Company,	Dec. 14,	30,000

Of these companies, only one, so far as the Board is informed, has commenced operations, the Gardner company having begun to supply gas about the end of the year. The Equitable Gas Company of Springfield applied to the Board of Aldermen for authority to open the streets, but permission was refused.

The following table shows the corporate name, the localities supplied, the capital and the par value of the shares of the companies in active operation on the 30th day of June last: —

CORPORATE NAME.	Localities Supplied.	Capital.	Par Value.
Adams Gas Light Co.,	Adams,	\$17,300	\$25
Amesbury & Salisbury Gas Light Co.,	Amesbury,	1,250	50*
Amherst Gas Co.,	Amherst,	10,000	100
Arlington Gas Light Co.,	Arlington,	70,000	100
	Belmont,	—	—
	Winchester,	—	—
Attleborough Gas Light Co.,	Attleborough	23,200	100
Beverly Gas Light Co.,	Beverly,	40,000	100
Boston Gas Light Co.,	Boston (city proper)	2,500,000	500
Brockton Gas Light Co.,	Brockton,	64,000	100
Brookline Gas Light Co.,	Brookline,	350,000	100
	Boston (Brighton District),	—	—
Cambridge Gas Light Co.,	Cambridge,	700,000	100
	Somerville (in part),	—	—
Charlestown Gas Co.,	Charlestown,	500,000	50
	Somerville (in part),	—	—
	Medford (in part),	—	—

\* 25 per cent. paid in.



CORPORATE NAME.	Localities Supplied.	Capital.	Par Value.
Chelsea Gas Light Co., . . . .	Chelsea, . . . .	\$300,000	\$100
Chicopee Gas Works, . . . .	Chicopee Centre, . . . .	30,000	—
Citizens' Steam & Gas Light Co. of Lynn, * . . . .	Lynn, . . . .	125,000	100
Citizens' Gas Light Co. of Quincy,	Quincy, . . . .	33,000	100
Citizens' Gas Light Co. of South Reading, . . . .	Wakefield, . . . .	95,300	100
	Reading, . . . .	—	—
	Stoneham, . . . .	—	—
Clinton Gas Light Co., . . . .	Clinton, . . . .	35,000	500
Cottage City Gas Co., . . . .	Cottage City, . . . .	60,000	100
Danvers Gas Light Co., . . . .	Danvers, . . . .	20,000	100
Dedham & Hyde Park Gas & Elec- tric Light Co., . . . .	Dedham, . . . .	100,000	50
	Hyde Park, . . . .	—	—
Dorchester Gas Light Co., . . . .	Boston (Dorchester District), . . . .	400,000	100
	Milton, . . . .	—	—
East Boston Gas Co., . . . .	Boston (E. Boston), . . . .	220,000	25
Easthampton Gas Co., . . . .	Easthampton, . . . .	30,000	100
Fall River Gas Works Co., . . . .	Fall River (in part), . . . .	288,000	100
Fitchburg Gas Co., . . . .	Fitchburg, . . . .	60,000	50
Gloucester Gas Light Co., . . . .	Gloucester, . . . .	62,300	50
Great Barrington Gas Light Co., . . . .	Great Barrington, . . . .	5,000	100
Greenfield Gas Light Co., . . . .	Greenfield, . . . .	50,000	50
Haverhill Gas Light Co., . . . .	Haverhill, . . . .	75,000	50
	Bradford, . . . .	—	—
Ipswich Gas Light Co., . . . .	Ipswich, . . . .	16,000	100
Jamaica Plain Gas Light Co., . . . .	Boston (Ward 23), . . . .	200,000	100
Lawrence Gas Co., . . . .	Lawrence, . . . .	400,000	100
	Methuen, . . . .	—	—
Leominster Gas Light Co., . . . .	Leominster, . . . .	50,000	100
Lexington Gas Light Co., . . . .	Lexington, . . . .	20,000	100
Lowell Gas Light Co., . . . .	Lowell, . . . .	500,000	100
	Dracut, . . . .	—	—
	Tewksbury, . . . .	—	—
Lynn Gas Light Co., . . . .	Lynn, . . . .	300,000	100
	Swampscott, . . . .	—	—
Malden & Melrose Gas Light Co., . . . .	Malden, . . . .	170,000	100
	Melrose, . . . .	—	—
	Medford (in part), . . . .	—	—
	Everett, . . . .	—	—
Manufacturers' Gas Light Co., . . . .	Fall River (in part), . . . .	50,000	100
Marblehead Gas & Electric Light Co., . . . .	Marblehead, . . . .	40,000	100
Marlborough Gas Light Co., . . . .	Marlborough, . . . .	50,000	100
Milford Gas Light Co., . . . .	Milford, . . . .	72,300	100
	Hopedale, . . . .	—	—
Miller's River Gas Light Co., . . . .	Athol, . . . .	40,000	100
Mutual Gas Light Co. of South- bridge, . . . .	Southbridge, . . . .	15,000	50
Nantucket Gas Light Co., . . . .	Nantucket, . . . .	36,000	100
Natick Gas Light Co., . . . .	Natick, . . . .	20,000	100
New Bedford Gas Light Co., . . . .	New Bedford, . . . .	225,000	100
Newburyport Gas Co., . . . .	Newburyport, . . . .	80,000	100
Newton & Watertown Gas Light Co., . . . .	Newton, . . . .	200,000	100
	Watertown, . . . .	—	—
	Wellesley, . . . .	—	—
	Weston, . . . .	—	—

\* This company manufactures fuel water gas.

CORPORATE NAME.	Localities Supplied.	Capital.	Par Value.
North Adams Gas Light Co., .	North Adams, .	\$50,000	\$100
Northampton Gas Light Co., .	Northampton, .	50,000	25
North Attleborough Gas Light Co.,	No. Attleborough, .	68,100	100
	Attleborough Falls,	—	—
	Wrentham, . .	—	—
Norwood Gas Light Co., . .	Norwood, . .	12,000	100
Pittsfield Coal Gas Co., . .	Pittsfield, . .	62,500	100
Plymouth Gas Light Co., . .	Plymouth, . .	40,000	100
Roxbury Gas Light Co., . .	Boston (Roxbury District), . .	600,000	100
Salem Gas Light Co., . . .	Salem, . . .	300,000	100
	Peabody, . . .	—	—
South Boston Gas Light Co., .	Boston (South Boston), . . .	440,000	100
Spencer Gas Co., . . . .	Spencer, . . . .	75,000	100
Springfield Gas Light Co., . .	Springfield, . .	500,000	100
Taunton Gas Light Co., . . .	Taunton, . . .	80,000	50
Waltham Gas Light Co., . . .	Waltham, . . .	140,000	100
Westfield Gas Light Co., . . .	Westfield, . . .	54,000	100
Woburn Gas Light Co., . . .	Woburn, . . .	45,100	100
Worcester Gas Light Co., . . .	Worcester, . . .	500,000	100

The company at Fitchburg furnishes water, that at Gloucester maintains a wharf and supplies water, and that at Springfield furnishes steam for heating. In addition to these, the companies in Charlestown, Cottage City, Spencer and Waltham, furnished electric light. In all these cases, the capital employed in such operations is not separated from that invested in the gas business, and the capital as given is the total capital of the companies.

The following table shows the names of the owners of gas works not owned by gas companies, the localities supplied and the estimated value of the plant:—

Chicopee Manufacturing Co., . .	Chicopee Falls, . .	\$15,000 00
Holyoke Water Power Co., . .	Holyoke, . . . .	100,000 00
A. H. Wray, . . . . .	Lee, . . . . .	10,000 00
W. B. Hammond, . . . . .	Middleborough, . .	22,000 00
Otis Co., . . . . .	Ware, . . . . .	10,000 00
Stevens Linen Works, . . . .	Webster, . . . .	18,000 00
	Dudley.	

The following companies have bonds and notes outstanding:—

Amherst, . . . . .	\$1,500 00
Attleborough, . . . . .	4,000 00
Beverly (special stock), . . . . .	11,800 00
Brockton, . . . . .	35,000 00
Brookline, . . . . .	55,000 00
Citizens' (Lynn), . . . . .	150,000 00
Citizens' (Quincy), . . . . .	13,000 00
Cottage City, . . . . .	21,240 00
Danvers, . . . . .	2,000 00
Dedham, . . . . .	11,000 00
Ipswich, . . . . .	7,000 00
Jamaica Plain, . . . . .	40,000 00
Lexington, . . . . .	3,272 00
Malden, . . . . .	50,000 00
Marblehead, . . . . .	1,500 00
Miller's River (Athol), . . . . .	20,000 00
Natick, . . . . .	10,000 00
New Bedford, . . . . .	51,000 00
North Adams, . . . . .	4,000 00
North Attleborough (dividend scrip), . . . . .	68,100 00
South Boston, . . . . .	20,000 00
Spencer, . . . . .	75,000 00
Waltham, . . . . .	30,000 00

The following table shows the whole number of stockholders, the number resident in Massachusetts and the value of the stock held within the Commonwealth:—

NAME OF COMPANY.	Whole Number of Stockholders.	Number of Stockholders resident in Massachusetts.	Value at par of Stock held in Massachusetts.
Adams, . . . . .	8	8	\$17,300
Amesbury, . . . . .	9	5	*1,050
Amherst, . . . . .	21	21	10,000
Arlington, . . . . .	59	41	46,400
Attleborough, . . . . .	29	26	22,000
Bay State, . . . . .	15	8	4,400
Beverly, . . . . .	44	36	32,100
Boston, . . . . .	690	621	2,320,500
Brockton, . . . . .	52	51	63,900
Brookline, . . . . .	120	109	316,900
Cambridge, . . . . .	387	345	623,100
Charlestown, . . . . .	244	227	468,450

\* Amount paid in.

NAME OF COMPANY.	Whole Number of Stockholders.	Number of Stockholders resident in Massachusetts.	Value at par of Stock held in Massachusetts.
Chelsea, . . . . .	124	117	\$293,500
Chicopee, . . . . .	2	2	30,000
Citizens', Lynn, . . . . .	12	2	200
Citizens', Quincy, . . . . .	53	51	32,500
Citizens', Wakefield, . . . . .	61	56	91,700
Clinton, . . . . .	17	17	35,000
Cottage City, . . . . .	22	19	40,200
Danvers, . . . . .	39	39	20,000
Dedham, . . . . .	40	36	97,500
Dorchester, . . . . .	195	183	364,900
East Boston, . . . . .	124	103	195,600
Easthampton, . . . . .	35	30	26,800
Fall River, . . . . .	10	7	13,200
Fitchburg, . . . . .	31	29	54,150
Gloucester, . . . . .	63	60	61,350
Great Barrington, . . . . .	10	10	5,000
Greenfield, . . . . .	38	27	43,750
Haverhill, . . . . .	56	49	64,000
Ipswich, . . . . .	28	28	16,000
Jamaica Plain, . . . . .	136	127	190,600
Lawrence, . . . . .	176	162	356,800
Leominster, . . . . .	60	57	49,200
Lexington, . . . . .	26	25	19,900
Lowell, . . . . .	262	229	447,200
Lynn, . . . . .	163	154	290,200
Malden, . . . . .	143	123	139,100
Manufacturers', Fall River, . . . . .	7	7	50,000
Marblehead, . . . . .	30	23	32,000
Marlborough, . . . . .	12	12	50,000
Milford, . . . . .	48	47	72,100
Miller's River (Athol), . . . . .	9	9	40,000
Mutual (Southbridge), . . . . .	29	27	13,300
Nantucket, . . . . .	57	53	34,700
Natick, . . . . .	38	38	20,000
New Bedford, . . . . .	168	141	203,200
Newburyport, . . . . .	65	51	68,100
Newton, . . . . .	178	167	186,700
North Adams, . . . . .	44	35	46,800
Northampton, . . . . .	40	29	30,925
North Attleborough, . . . . .	37	34	67,400
Norwood, . . . . .	10	9	10,100
Pittsfield, . . . . .	51	43	58,500
Plymouth, . . . . .	30	24	30,700
Roxbury, . . . . .	250	243	593,800
Salem, . . . . .	253	237	283,500
South Boston, . . . . .	27	23	39,400
Spencer, . . . . .	17	17	75,000
Springfield, . . . . .	93	82	456,500
Taunton, . . . . .	99	95	76,100
Waltham, . . . . .	116	111	132,000
Westfield, . . . . .	23	20	47,700
Woburn, . . . . .	49	48	43,900
Worcester, . . . . .	184	172	460,800

## BOOKS, ACCOUNTS AND RETURNS.

The returns required by law for the year ending June 30, 1887, have been received from every company under the supervision of the Board, and with greater promptness than hitherto. Although it has not been found necessary to secure the intervention of the Attorney-General's Department in any instance, some of the companies are still too tardy in making their returns, causing thereby much extra labor and delay on account of the correspondence necessary in the correction and tabulation of the numerous statistics they contain.

From a careful study of these returns it is clear that substantial progress has been made towards uniformity of accounts, and that many of the extreme inaccuracies of former returns have been avoided. The principal difficulties have arisen in dealing with the various items of income and expense and the accounts of profit and loss; but there is reason to believe that in the returns for the current year much of this diversity will be eliminated. There is no part of the return in which strict uniformity of method and accuracy of detail is more imperatively demanded.

A very few returns give evidence of serious indifference to the requirements of law and the requests of the Board, but there is still need of great improvement in the case of a much larger number. To secure this the Board has devoted such time and attention as their other duties permitted, and now believes that all the companies may be credited with a sincere effort to make their accounts conform, in all respects, to the forms prescribed.

The failure of the companies to do this earlier must be regarded, upon a strict construction of the statute, as a violation of law; but the Board has not yet deemed it necessary in any case to resort to the extreme measures which the law provides. The instructions concerning the form of accounts have now, however, been so long in the possession of those who are to use them that there would seem to be no further valid excuse for any failure to understand and apply them.

The following statistics exhibit the aggregate receipts and ex-

penses of all the companies in the State, compiled from the items relating to the manufacture and sale of gas in the last two returns made to the Board : —

	FOR YEAR ENDING JUNE 30.	
	1886.	1887.
<b>RECEIPTS : —</b>		
For gas sold by meter, . . . . .	\$3,678,206 06	\$3,789,643 30
For gas supplied to public lamps, . . . .	433,063 62	421,430 65
From sales of coke, . . . . .	—	290,692 31
“ “ tar, . . . . .	—	66,880 66
“ “ ammoniacal liquor, . . . . .	—	23,370 82
“ “ residuals products, . . . . .	347,985 34	—
“ rent of meter, . . . . .	1,444 46	1,210 36
“ “ gas stoves and engines, . . . . .	1,750 20	1,602 95
“ “ gas lamps, . . . . .	—	470 57
From public lamps other than gas lamps, . .	8,806 01	8,945 05
From other sources, . . . . .	1,078 24	592 41
Total, . . . . .	\$4,472,333 93	\$4,604,838 08
<b>EXPENSES : —</b>		
1. Coals, . . . . .	\$1,091,881 09	\$1,148,718 10
2. Enrichers, . . . . .	96,796 08	128,323 35
3. Purifying materials, . . . . .	37,286 59	38,195 89
4. Water, . . . . .	18,497 18	21,865 77
5. Wages at works, . . . . .	563,940 68	593,100 55
6. Repairs and maintenance of works (including renewal of retorts), . . . . .	186,418 02	222,759 07
7. Apparatus and machinery, . . . . .	78,095 20	4,821 84
8. Wages of meter takers, clerical labor in distribution, and salary or commission of collectors, . . . . .	84,257 15	95,943 92
9. Repairs, renewals and mainten- ance of mains and service pipes, . .	130,537 98	104,279 74
10. Repairs and renewals of meters, . .	42,241 42	47,877 56
11. Lighting and repairing (gas lamps only), . . . . .	17,605 32	18,079 71
12. Lighting and repairing and mate- rials used for other lamps, . . . .	6,714 52	7,117 61
13. Directors' allowances, . . . . .	1,545 15	2,377 35
14. Salaries of officers, . . . . .	83,379 38	94,497 43
15. General salaries, . . . . .	115,619 09	111,101 36
16. Rent of offices, . . . . .	7,850 01	9,656 93
17. General office expenses, . . . . .	36,984 43	30,956 99
18. Taxes, . . . . .	220,596 06	230,580 13
19. Fire insurance, . . . . .	31,626 57	3,881 29
20. Law expenses, . . . . .	7,375 23	21,469 52
21. Claims, . . . . .	10,947 11	9,843 52
22. Bad debts, . . . . .	8,223 00	21,921 14
23. Incidental expenses, . . . . .	53,100 44	63,855 39
Total, . . . . .	\$2,931,517 70	\$3,031,224 16

	FOR YEAR ENDING JUNE 30.	
	1886.	1887.
Leaving an apparent net profit on their gas business of, . . . . .	\$1,540,816 23	\$1,573,613 92
They have also received for interest, . . . . .	30,433 14	31,809 72
"    "    "    rents, etc., . . . . .	22,945 87	41,126 66
Making a total, . . . . .	\$1,594,195 24	\$1,646,550 30
From these receipts were paid interest on bonds and loans, . . . . .	\$26,696 46	\$25,959 23
Dividends, . . . . .	993,573 00	996,577 00
Other items, . . . . .	4,499 35	13,025 82
Leaving a surplus for the year of, . . . . .	\$1,024,768 81 \$569,426 43	\$1,035,562 05 \$610 998 25

Four of the companies appear not to have earned expenses, three others have not earned sufficient to warrant the declaring of any dividend upon their capital, and eight others have paid a part of their dividends out of a surplus earned in former years. The Marlborough Company has declared a dividend which it seems neither to have earned nor been able to pay.

In view of the large and rapid development of electric lighting throughout the State and of a considerable reduction in the average price, it is worthy of note that the receipts from sales by meter show a gain of more than \$111,000, and that the receipts from street lighting have fallen off less than \$12,000, or but a trifle more than  $2\frac{1}{2}$  per cent. The considerable change in the expense items numbered 7, 14, 15 and 17, is due principally to an apportionment of these expenses in the returns of 1887 more nearly according to the prescribed form of accounts.

In the Appendix will be found under date of June 30, 1887, the separate balance sheet of the companies, as taken from the annual returns, with corrections made by the Board after examination and correspondence with the officers of the several companies.

Aggregates from these balance sheets and those in the returns of 1886 show the following facts:—

	YEAR ENDING JUNE 30.	
	1886.	1887.
<b>ASSETS:—</b>		
Real estate, machinery, street mains and meters, . . . . .	\$12,389,932 24	\$12,497,087 93
Cash on hand, . . . . .	676,568 33	604,845 51
Due for gas, . . . . .	408,900 04	413,317 21
Other accounts due, . . . . .	92,561 88	59,877 21
Materials, etc., . . . . .	379,117 40	590,571 12
Notes receivable, . . . . .	381,840 56	371,607 71
Investments, . . . . .	332,038 45	366,217 37
	\$14,660,958 90	*\$14,903,524 06
<b>LIABILITIES:—</b>		
Capital stock, . . . . .	\$11,507,150 00	\$11,635,350 00
Bonds, . . . . .	224,700 00	288,662 00
Notes payable, . . . . .	223,110 00	294,133 18
Unpaid bills, . . . . .	74,156 16	95,413 76
Unpaid dividends, . . . . .	62,307 50	59,253 50
Deposits, . . . . .	7,220 10	23,483 32
Interest due and unpaid, . . . . .	1,534 52	1,521 83
Other items, . . . . .	14,928 79	41,852 07
	\$12,115,107 07	\$12,439,669 66
Reserved and depreciation funds, . . . . .	743,884 74	691,446 36
	\$12,858,991 81	\$13,131,116 02
Surplus, . . . . .	1,801,967 09	1,772,408 04
	\$14,660,958 90	*\$14,903,524 06

Of these companies—

53 show an aggregate surplus of . . . . .	\$1,902,217 69	\$1,868,334 78
8 show an aggregate deficit of . . . . .	100,250 60	95,926 74
Leaving total net surplus as shown above, . . . . .	\$1,801,967 09	\$1,772,408 04
Which added to reserves carried as liabilities, . . . . .	743,884 74	691,446 36
Would show an actual surplus of . . . . .	\$2,545,851 83	\$2,474,954 40
Equivalent to per cent. on capital of about . . . . .	22	21

\* Not including the Bay State Company of Boston, which was not in operation on June 30, 1887.



This is a decrease for the year of \$70,896.43, or less than 1 per cent. on the capital stock.

The following table shows the valuation of the property of each company as assessed by the local assessors :—

Name of Company.	Assessed Value.	Name of Company.	Assessed Value.
Adams, . . . .	\$12,900	Lynn, . . . .	\$107,050
Amesbury, . . . .	1,000	Malden, . . . .	120,500
Amherst, . . . .	10,000	Manufacturers' (Fall	
Arlington, . . . .	35,150	River), . . . .	45,300
Attleborough, . . . .	11,500	Marblehead, . . . .	13,400
Bay State, . . . .	202,000	Marlborough, . . . .	10,700
Beverly, . . . .	15,750	Milford, . . . .	76,638
Boston, . . . .	4,269,100	Miller's River (Athol),	10,000
Brockton, . . . .	68,300	Mutual (Southbridge),	7,700
Brookline, . . . .	337,700	Nantucket, . . . .	6,000
Cambridge, . . . .	662,000	Natick, . . . .	12,200
Charlestown, . . . .	536,300	New Bedford, . . . .	260,000
Chelsea, . . . .	271,400	Newburyport, . . . .	40,200
Chicopee, . . . .	28,000	Newton, . . . .	270,280
Citizens' (Lynn), . . . .	20,000	North Adams, . . . .	12,500
Citizens' (Quincy), . . . .	13,350	Northampton, . . . .	51,000
Citizens' (Wakefield), . . . .	22,000	North Attleborough, . . . .	53,300
Clinton, . . . .	25,000	Norwood, . . . .	*
Cottage City, . . . .	*	Pittsfield, . . . .	64,500
Danvers, . . . .	3,950	Plymouth, . . . .	14,250
Dedham, . . . .	35,000	Roxbury, . . . .	602,900
Dorchester, . . . .	298,200	Salem, . . . .	284,600
East Boston, . . . .	81,400	South Boston, . . . .	390,500
Easthampton, . . . .	29,500	Spencer, . . . .	24,000
Fall River, . . . .	178,900	Springfield, . . . .	434,770
Fitchburg, . . . .	61,450	Taunton, . . . .	64,400
Gloucester, . . . .	58,500	Waltham, . . . .	141,500
Great Barrington, . . . .	1,200	Westfield, . . . .	44,400
Greenfield, . . . .	19,500	Woburn, . . . .	45,100
Haverhill, . . . .	122,500	Worcester, . . . .	527,000
Ipswich, . . . .	5,400	Chicopee Falls, . . . .	10,000
Jamaica Plain, . . . .	175,700	Holyoke, . . . .	100,000
Lawrence, . . . .	376,000	Ware, . . . .	14,550
Leominster, . . . .	23,000	Webster, . . . .	7,500
Lexington, . . . .	1,500	Lee, . . . .	3,100
Lowell, . . . .	1,110,570	Middleborough, . . . .	*
			\$12,993,458

\* Not returned.

If the three companies which do not return their taxable value be included in the total at their value of last year, \$18,800, the total valuation would be \$13,012,358 ; or omitting Spencer, as not in last year's list, an increase of \$798,590 over last year's valuation.

The following table shows the amount paid by each company for taxes and the amount for each thousand feet of gas sold : —

NAME OF COMPANY.	Amount of Taxes paid.	Amount per Thousand sold.
Adams, . . . . .	\$354 38	\$0.0593
Amesbury, . . . . .	26 48	.0374
Amherst, . . . . .	154 39	.1990
Arlington, . . . . .	672 50	.1239
Attleborough, . . . . .	396 31	.0733
Beverly, . . . . .	224 54	.0499
Boston, . . . . .	60,531 32	.0567
Brockton, . . . . .	1,167 91	.0928
Brookline, . . . . .	5,039 32	.1207
Cambridge, . . . . .	16,183 49	.1603
Charlestown, . . . . .	8,402 08	.1230
Chelsea, . . . . .	5,529 33	.2072
Chicopee, . . . . .	477 55	.0714
Citizens' (Lynn), . . . . .	197 32	<i>a</i>
Citizens' (Quincy), . . . . .	277 95	.0583
Citizens' (Wakefield), . . . . .	519 50	.1300
Clinton, . . . . .	620 54	.0911
Cottage City, . . . . .	113 56	<i>a</i>
Danvers, . . . . .	44 71	.0459
Dedham, . . . . .	702 08	.1104
Dorchester, . . . . .	5,885 91	.1362
East Boston, . . . . .	4,666 96	.1490
Easthampton, . . . . .	452 45	.1483
Fall River, . . . . .	5,831 79	.1443
Fitchburg, . . . . .	1,294 40	.1109
Gloucester, . . . . .	1,389 13	.1479
Great Barrington, . . . . .	22 49	.0532
Greenfield, . . . . .	747 53	.1753
Haverhill, . . . . .	1,907 46	.0529
Ipswich, . . . . .	93 11	.0801
Jamaica Plain, . . . . .	3,662 11	.1523
Lawrence, . . . . .	8,742 89	.1325
Leominster, . . . . .	499 52	.3229
Lexington, . . . . .	71 05	.0953
Lowell, . . . . .	14,631 75	.0855
Lynn, . . . . .	5,092 99	.1199
Malden, . . . . .	2,652 83	.1144
Manufacturers' (Fall River), . . . . .	912 44	.0779
Marblehead, . . . . .	371 09	.1223
Marlborough, . . . . .	303 12	.0911
Milford, . . . . .	1,230 36	.1826
Miller's River (Athol), . . . . .	160 54	.0748
Mutual (Southbridge), . . . . .	249 10	.1760
Nantucket, . . . . .	122 28	.0577
Natick, . . . . .	317 18	.1185
New Bedford, . . . . .	5,004 71	.1240

*a* Gas sold not given.

NAME OF COMPANY.	Amount of Taxes paid.	Amount per Thousand sold.
Newburyport, . . . . .	\$1,154 81	\$0.1412
Newton, . . . . .	4,121 51	.1086
North Adams, . . . . .	574 09	.0435
Northampton, . . . . .	830 24	.0953
North Attleborough, . . . . .	1,253 37	.1211
Norwood, . . . . .	167 91	<i>a</i>
Pittsfield, . . . . .	1,728 69	.1362
Plymouth, . . . . .	292 72	.0805
Roxbury, . . . . .	13,272 91	.0976
Salem, . . . . .	5,148 69	.1426
South Boston, . . . . .	6,487 57	.1181
Spencer, . . . . .	763 56	<i>b</i>
Springfield, . . . . .	8,136 76	.1363
Taunton, . . . . .	1,638 95	.0575
Waltham, . . . . .	2,034 17	.0826
Westfield, . . . . .	819 96	.1697
Woburn, . . . . .	894 28	.1329
Worcester, . . . . .	13,805 99	.1716
Chicopee Falls, . . . . .	*	
Holyoke, . . . . .	239 59 <sup>c</sup>	.0061
Ware, . . . . .	241 00	.0614
Webster, . . . . .	101 07	.0755
Lee, . . . . .	50 63	.2486
Middleborough, . . . . .	*	
Total, . . . . .	\$231,708 92	

\* No tax returned.

*a* Gas sold not given.*b* Works in operation only three months.*c* Gas Commission and Inspector only.

The total sum paid by the companies for taxes, including State inspection, was \$231,708.92, an average of  $10\frac{16}{100}$  cents per thousand feet sold, being an increase over the previous year, in the total amount, of \$10,760.69, and of  $7\frac{6}{100}$  of a cent per thousand feet of gas sold.

## DIVIDENDS.

The dividends declared by the several companies during the year are shown in the following table : —

NAME OF COMPANY.	Rate per cent.	Amount of Dividends.	Amount per Thousand sold.
Adams, . . . . .	20	<sup>1</sup> \$3,385	\$0.5668
Amesbury, . . . . .	—	<sup>2</sup> —	—
Amherst, . . . . .	8	800	1.0339
Arlington, . . . . .	6	4,200	.7739
Attleborough, . . . . .	8	1,856	.3434
Beverly { ordinary stock, . . . . .	—	<sup>2</sup> —	—
{ special stock, . . . . .	6	708	.1574
Boston, . . . . .	10	250,000	.2185
Brockton, . . . . .	7	4,480	.3572
Brookline, . . . . .	6	21,000	.5032
Cambridge, . . . . .	10	70,000	.6776
Charlestown, . . . . .	10	50,000	.7319
Chelsea, . . . . .	6	18,000	.6746
Chicopee, . . . . .	15	4,500	.6727
Citizens' (Lynn), . . . . .	—	<sup>2</sup> —	—
Citizens' (Quincy), . . . . .	—	<sup>2</sup> —	—
Citizens' (Wakefield), . . . . .	3	2,859	.7157
Clinton, . . . . .	8	2,800	.4110
Cottage City, . . . . .	—	<sup>2</sup> —	—
Danvers, . . . . .	—	<sup>2</sup> —	—
Dedham, . . . . .	2	2,000	.3145
Dorchester, . . . . .	6	24,000	.5554
East Boston, . . . . .	12	26,400	.8433
Easthampton, . . . . .	10	3,000	.9836
Fall River, . . . . .	7	20,160	.4990
Fitchburg, . . . . .	10	6,000	.5143
Gloucester, . . . . .	8	<sup>3</sup> 4,984	.5308
Great Barrington, . . . . .	—	<sup>2</sup> —	—
Greenfield, . . . . .	6	3,000	.7035
Haverhill, . . . . .	10	7,500	.2082
Ipswich, . . . . .	—	<sup>2</sup> —	—
Jamaica Plain, . . . . .	8	16,000	.6653
Lawrence, . . . . .	8	32,000	.4850
Leominster, . . . . .	5	2,500	1.6063
Lexington, . . . . .	2	400	.5367
Lowell, . . . . .	12	60,000	.3507
Lynn, . . . . .	5 <sup>1</sup> / <sub>2</sub>	16,500	.3886
Malden, . . . . .	6	10,200	.4400
Manufacturers' (Fall River), . . . . .	22	11,000	.9393
Marblehead, . . . . .	6	2,400	.7909
Marlborough, . . . . .	5	2,500	.7511
Milford, . . . . .	8	5,784	.8584
Miller's River (Athol), . . . . .	—	<sup>2</sup> —	—
Mutual (Southbridge), . . . . .	8	1,200	.8479

<sup>1</sup> In addition to the dividend a rebate is allowed to mills holding stock on the gas used by them.

<sup>2</sup> No dividend declared.

<sup>3</sup> An additional dividend of four per cent. was declared from earnings of wharf property.

NAME OF COMPANY.	Rate per cent.	Amount of Dividends.	Amount per Thousand Sold.
Nantucket, . . . . .	5	\$1,800	\$0.8491
Natick, . . . . .	9	1,800	.6726
New Bedford, . . . . .	9	20,250	.5017
Newburyport, . . . . .	6	4,800	.5871
Newton, . . . . .	8	16,000	.4217
North Adams, . . . . .	8	4,000	.3035
North Attleborough, . . . . .	8	5,448	.5284
Northampton, . . . . .	6	3,000	.3443
Norwood, . . . . .	—	1 —	—
Pittsfield, . . . . .	15	10,000	.7387
Plymouth, . . . . .	7	2,800	.7697
Roxbury, . . . . .	10	60,000	.4412
Salem, . . . . .	6	18,000	.4985
South Boston, . . . . .	7½	33,000	.6005
Spencer, . . . . .	—	1 —	—
Springfield, . . . . .	10	50,000	.8221
Taunton, . . . . .	10	8,000	.2817
Waltham, . . . . .	6	7,900	.3207
Westfield, . . . . .	8	4,320	.8938
Woburn, . . . . .	9	4,059	.6033
Worcester, . . . . .	9½	47,500	.5904
	—	\$994,793	—

<sup>1</sup> No dividend declared.

### PRICE OF GAS.

Between June 30, 1886, and June 30, 1887, the following companies have made reductions in the price of gas : —

Boston,	Natick,
Clinton,	New Bedford,
Danvers,	Newburyport,
East Boston,	North Adams,
Easthampton,	North Attleborough,
Fall River,	Roxbury,
Gloucester,	Salem,
Ipswich,	South Boston,
Lawrence,	Taunton,
Lowell,	Holyoke,
Lynn,	Webster,
Manufacturers' (Fall River),	Middleborough.

The following pages show the price charged by the several companies June 30, 1887, the average candle-power as shown by the tests made by the State Inspector of Gas, and the average price per thousand feet sold by meter, received in the two years ending the 30th of June, 1887.

The gas made is coal-gas, except where otherwise noted.

NAME OF COMPANY.	Average Candle- Power.	Gross Price.	REMARKS.	Average price, 1885-6.	Average price, 1886-7.
Adams, . . . . .	16.60	\$3 00	20 per cent. discount if paid at the office within 5 days from date of bill, . . . . .	\$2 46	\$2 40
Arlington, . . . . .	16.63	3 00	. . . . .	3 00	3 00
Attleborough, . . . . .	16.86	2 25	. . . . .	2 25	2 25
Beverly, . . . . .	17.53	3 00	Discount 10 per cent. on 1,000 feet and 20 per cent. on 10,000 feet turned in one quarter and paid within ten days from presentation of the bill	2 86	2 61
Boston, . . . . .	18.99	1 40	Discounts made at the end of the year to consumers of \$1,000 worth and upwards, according to a sliding scale.	1 48	1 46
Brockton, . . . . .	16.98	2 25	To some large consumers \$2.00.	2 16	2 25
Brookline, . . . . .	17.95	2 20	25 cents per M allowed if paid within 25 days; to large consumers 35 cents, to large-est 50 cents, per M allowed.	2 42	2 18
Cambridge, . . . . .	17.59	2 00	. . . . .	1 73	1 71
Charlestown, . . . . .	17.79	2 00	. . . . .	1 73	1 72
Chelsea, . . . . .	18.54	2 20	25 cents per M discount if paid in 15 days. Coal-gas and water-gas, . . . . .	2 37	2 14
Chilropee, . . . . .	17.46	2 50	\$2 net per M to parties using over \$300 worth of gas per annum, . . . . .	2 28	2 25
Citizens' (Quincy), . . . . .	16.70	3 00	50 cents per M discount for payment within 10 days, . . . . .	2 46a	2 46a
Citizens' (Wakfield), . . . . .	17.36	3 50	Discount of 50 cents per M given when large amount is consumed, . . . . .	3 38	3 37
Clinton, . . . . .	17.86	2 50	Discount of 50 cents per M to large consumers, . . . . .	2 12	2 19
Cottage City, . . . . .	17.60	3 50	5 per cent. discount on all bills paid before the 10th of the month, . . . . .	-	-
Danvers, . . . . .	16.85	3 25	20 cents per M discount. Water-gas, . . . . .	3 09b	3 26
Dedham, . . . . .	17.23	3 25	25 cents per M if paid by the 15th of the month, . . . . .	2 77	2 57
Dorchester, . . . . .	17.89	2 70	Discount of 50 cents per M if paid before the 16th of the month; large consumers, price \$2.50; if more than 1,000,000 feet is used in year, \$2.25.	2 48	2 23
East Boston, . . . . .	17.35	1 75	50 cents per M discount on bills paid within 10 days, . . . . .	1 96	1 81
Easthampton, . . . . .	17.70	3 00	63 per cent., discount, making net price \$2.80. To the town, and consumers using 30,000 feet a year, the bills are made at \$2.50 per M, with a discount of 4 per cent., making \$2.40 net.	2 79	2 70
Fall River, . . . . .	17.04	2 00	25 cents discount per M if bills are paid by the 15th of the month. On bills of less than \$1,000 only 10 cents is allowed. Large consumers \$1.75, with discount of 25 cents as above.	1 84	1 76
Fitchburg, . . . . .	17.70	2 00	Some special contracts, . . . . .	2 17	1 92
Gloucester, . . . . .	17.80	2 50	20 per cent. discount on bills paid within 15 days, . . . . .	2 24	2 01
Greenfield, . . . . .	18.03	2 75	Discount on bills of \$15 per month 5 per cent., on bills of \$40 per month 10 per cent.	2 66	2 66

Haverhill,	17.67	1 80	Discount of 20 cents per M if paid at the office within 10 days, .	1 68	1 60
Jamaica Plain,	17.34	3 25	Discount of \$1 per M if paid within 15 days; city public buildings 5 per cent. off net price.	2 40	2 24
Lawrence,	18.13	1 70	10 cents per M discount if paid by the 15th of the month; between 250,000 and 800,000 feet a year \$1.50, less 10 cents; over 800,000 feet a year, \$1.30 net.	1 48	1 45
Lowell,	17.80	1 50	30 cents per M discount on bills paid on or before the fifth business day of each month.	1 38	1 29
Lynn,	17.70	2 00	20 cents per M discount if bills are paid within 10 days of date of bill; \$1.50 to gas engines. Coal-gas and water-gas.	2 00	1 81
Malden,	17.60	2 50	Discount 25 cents per M if paid by 20th of the month. Factories and large consumers 50 cents, 75 cents and \$1 per M discount.	2 33	2 16
Manufacturers' (Fall River),	17.72	2 00	Discounts: On less than 500 feet per month, 10 cents per M; on more than 500 feet, 25 cents per M; mills and large consumers, 50 cents per M.	1 78	1 70
Marblehead	16.95	3 50	Discount 50 cents per M,	2 90	2 84
Marlborough,	17.60	3 00	5 per cent. to large consumers. A few special contracts, . . . . .	2 86	2 67
Millford,	16.70	2 00	5 per cent. discount on all bills exceeding \$50 a month, . . . . .	1 96	1 98
Miller's River (Athol),	20.90	3 00	50 cents per M discount if paid within 20 days; also 5 per cent. additional to small mills, etc., and 10 per cent. to large mills, etc. Water-gas.	2 45b	2 41
Nantucket,	17.35	3 00	Discount 10 cents per M if paid within 10 days; to consumers using 10,000 feet per quarter, 20 cents per M.	3 00	2 95
Natick,	18.25	2 70	Discount 10 per cent. if bill is paid within 5 days; to consumers of 4,000 feet monthly, 25 per cent.	2 80	2 81
New Bedford,	17.20	2 00	For prompt payment, to general consumers, 10 per cent.; to large consumers, 20 per cent.	1 71	1 62
Newburyport,	18.26	2 50	Discount of 25 cents per M for prompt payment; for a yearly consumption of 100,000 feet, \$2.10; of 200,000 feet, \$2; of 300,000 feet, \$1.90; of 500,000 feet, \$1.75.	2 43	2 23
Newton,	17.71	2 50	\$2.15 and \$1.85, . . . . .	2 31	2 19
North Adams,	18.65	2 25	Discount to consumers of more than 1,000 feet and less than 25,000 feet a month, 5 per cent.; more than 25,000 feet a month, 10 per cent.	2 10	2 07
Northampton,	17.82	2 25	Discount of 50 cents per M if paid before the 16th of the month, . . . . .	2 39	2 22
North Attleborough,	17.12	2 75	Discount of 30 cents per M if paid within 15 days. Special rates to large consumers, . . . . .	2 63	2 46
Norwood,	19.25	3 00	Less than 1,000 feet per month, 10 per cent.; over 1,000 feet and less than 50,000 feet, 20 per cent.; over 50,000 feet, 25 per cent.	2 64	2 03
Pitt-field,	19.85	2 50	Special rates to large consumers.	2 08	
Plymouth,	17.15	2 50	City of Boston, on gas registered by meters, and to consumers of over \$500 worth per year, 5 per cent.	2 33	2 26
Roxbury,	18.25	1 75	10 per cent. discount if bill is paid in 15 days, . . . . .	1 75	1 75
Salem,	18.10	2 00		2 01	1 80

a Includes street lamps.

b For six months, to June 30, 1886.

NAME OF COMPANY	Average Candle- Power.	Gross Price.	REMARKS.	Average price, 1885-6.		Average price, 1886-7.	
South Boston,	17.76	\$2 00	Discount of 10 per cent. if bill is paid by the 18th of the month,	\$1 97		\$1 72	
Spencer,	15.15	1 25	Discounts: 10 per cent. on bills over \$500 a year; 5 per cent. on bills less than \$600,	2 08		1 95	
Springfield,	18.29	2 00	for prompt payment.				
Taunton,	18.03	1 65	Over 125,000 feet a quarter, \$1.45.	1 47		1 59	
Waltham,	17.44	2 50	Discount of 50 cents per M for payment by 15th of the month,	1 81		1 84	
Westfield,	17 66	2 50	Discount of 5 per cent. if bills are paid within 5 days, and 10 per cent. if the bills of	2 74		2 33	
Woburn,	17.53	2 20	the year amount to 50,000 feet.				
Worcester,	17.93	2 25	20 cents discount per M if paid by the 15th of the month,	2 04		2 00	
			20 per cent. discount if paid on or before the 15th of the month.	1 92		1 82	
Holyoke,	18.02	2 00	water-gas.				
			5 per cent. discount to general consumers and 12½ per cent. to mills and manufactur-	2 10		1 94	
Ware,	17.93	3 00	ers if paid within 5 days.				
Webster,	18.00	3 00	Public institutions \$2,	2 94		2 93	
Amesbury,	26.80	3 25	10 per cent. allowed on bills of 1,000 feet a month and over,	3 53		3 16	
Amherst,	38.45	6 00	Oil-gas, with 33½ per cent. of air. Since August, water gas,	3 25		3 25	
			Discounts: If bill amounts to \$5 per month, 5 per cent.; to \$10, 10 per cent.; to \$20,	5 60		5 36	
			15 per cent.; to \$50, 20 per cent.; to \$75, 25 per cent., if paid within 10 days. Oil-				
Great Barrington,	25.65	4 85	gas, with 5 to 8 per cent. of air.				
Ipswich,	26.95	3 50	Oil-gas, with 30 per cent. of air.	3 55		4 47	
Leontuster,	26.60	5 00	\$2.50. Oil-gas, with 25 per cent. of air,	3 56		2 72	
			10 per cent. discount if 10,000 feet are used in one month. Special rate to one large	5 00		5 08	
Lexington,	26.30	6 00	consumer for gas used for heating. Oil-gas, with 50 per cent. of air.				
			Discount 10 per cent. for prompt payment. A few large consumers are allowed a	5 40		5 11	
Mutual (Southbridge),	24.35	3 00	special rate. Oil-gas, with about 33½ per cent. of air.				
			5 per cent. on all gas consumed over 2,000 feet a month for hotel and mechanical	3 31		3 00	
Chicopee Falls,	27.90	5 00	purposes. Oil-gas, with from 30 to 40 per cent. of air.				
Lee,	55.50	7 50	Large consumers \$4. Oil-gas, with about 30 per cent. of air,	4 62		4 45	
Middleborough,	25.10	4 00	Pure oil-gas,	7 50		7 50	
			Oil-gas, with about 40 per cent. of air,	4 33		a	

a Not returned.



In the preceding table the Citizens' Steam and Gas Light Company of Lynn is omitted. This company makes only fuel gas (non-illuminating water gas), and has sold a portion of its make under contracts and a portion at fifty cents a thousand feet.

Within the two and a half years that the Board has been in existence, forty-one companies, or nearly two-thirds of the whole number in active operation in the State, have lowered the price from ten cents to one dollar per thousand feet, and four of the companies have made two reductions.

This reduction is undoubtedly due, in part, to the competition caused by the great activity and energy which has been manifested in everything connected with lighting. The larger share of this enterprise and push has been devoted to the improvement and development of the electric light, and, in a much less degree, in the perfection of lamps for burning kerosene oil, having regard both to the brilliancy of the light and the artistic beauty of the lamp itself. There is another fact, too, that has had an influence in cheapening the price of gas, which is becoming more apparent. It is the policy already adopted by some companies of selling gas at the lowest possible price in order to increase the consumption. Within certain limits and conditions the larger the output of gas the less the price at which it can be produced. In other words, there is more profit to a company in selling a very large amount of gas at a low price, than in selling a small amount at a high price; and, within reasonable limits, the more the price is reduced the larger the profit. Some of the companies seem to have adopted this policy as a sound business method of making money.

The capitalization of companies is an important factor governing the price of gas. Fortunately for the consumers in this State, a large majority of the companies are conservative in this respect, and but few have watered their stock. The entire capitalization of the companies in active operation in the State, including both capital stock and bonds, is \$11,944,522. The assessed valuation of the companies is \$12,626,208. This conservative course of the Massachusetts gas companies is in striking contrast with that of those in some other localities. In New York city there is a capital of \$40,000,000; Brooklyn, \$12,500,000; Baltimore, \$11,600,000; and Chicago, \$25,000,000.

Not a few of the companies are improving their plants by the introduction of more approved apparatus in the manufacture of gas with a view to lessen its cost. And there is a constant effort made to improve the methods of burning gas for illumination, by which there shall be a greater economy in consumption and a greater efficiency in the light.

The Spencer Gas Company which was organized July 31, 1886, adopted the policy of a large sale at a low price as one of the strongest grounds on which it hoped to attain the greatest success. Spencer is an enterprising business town of about 8,000 inhabitants and largely engaged in shoe manufacturing. The company, which has an electric light plant in connection with its gas plant, started with a capital of \$50,000, which has since been increased to \$75,000, and it has issued bonds to the same amount, making a total of \$150,000 for capital and bonds, nearly all of which was taken by the citizens of the town.

The plant was originally built for the manufacture of a mixed coal and water-gas, but soon after the works were ready for operation they were nearly destroyed by an explosion and fire. For several months after the plant was rebuilt the company made straight coal-gas.

The object of the company, as already stated, was to sell the largest amount of gas possible, and the price was fixed at \$1.25 per thousand feet. In addition to the low price charged, personal efforts were made to introduce the gas for heating and cooking as well as for illumination. The president of the company, its most enthusiastic promotor, had a series of exhibitions at his residence, to show the possibilities of gas for heating and cooking and the convenience and comfort there are in banishing from one's residence wood and coal as fuel.

To these exhibitions a large number of the citizens of the town were invited. In addition to this, the company rented a large store, centrally located, and stocked it with the most approved gas stoves, which were sold to consumers of gas at first cost. Ordinary coal cooking-stoves were also converted into gas stoves by inserting perforated gas pipes in the fire-box and surrounding them with broken fire-brick. As the results of these efforts, in a few weeks,

time ninety gas stoves were introduced. Some families use no other fuel.

The company began business in March, 1887, and the length of time it has been in operation is not sufficient to determine the degree of the success of the enterprise.

The average price to consumers for coal-gas of twenty companies, making annually more than 30,000,000 feet each, is \$1.586 per thousand feet. The average price of the remainder of the coal-gas companies is \$2.168, making an average for all of \$1.659 per thousand. The average price of oil gas is \$4.13 per thousand feet. The average of prices of gas in one hundred and twenty-two of the leading cities in the United States and Canada (omitting those in this State), as given in a chart compiled by Mr. Emerson McMillin of Columbus, Ohio, and published in September, 1887, was \$1.85 per thousand feet. From these facts it appears that the prices of gas in this State compare very favorably with those elsewhere.

The following table shows the amount of gas made in the year ending June 30, 1887, and in the year ending June 30, 1886; the amount sold by meter and to public lamps in both these years; the amount used at works and offices; and the amount of gas unaccounted for during the year ending June 30, 1887, and the percentage of unaccounted-for gas both years:—

*Coal-Gas Companies.*

NAME OF COMPANY.	Gas Made Year Ending June 30, 1887.	Gas Made Year Ending June 30, 1886.	Gas Sold by Meter Year Ending June 30, 1886.	Gas Sold for Public Lamps Year Ending June 30, 1887.	Gas Sold for Public Lamps Year Ending June 30, 1886.	Gas Used at Works and Offices Year Ending June 30, 1887.	Gas Unac- counted for Year Ending June 30, 1887.	Percentage unaccount- ed for, 1886-7.	Percent- age unac- counted for, 1885-6.
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.		
Adams, . . . . .	6,650,000	5,775,000	4,847,500	625,000	500,000	15,000	672,920	10.10	7.14
Arlington, . . . . .	7,082,720	7,255,000	4,847,500	905,500	592,000	96,000	1,558,120	21.99	23.79
Attleborough, . . . . .	5,995,000	5,448,500	4,474,400	—	—	143,500	446,700	7.46	16.41
Beverly, . . . . .	6,257,800	5,668,380	3,600,000	452,000	422,000	80,000	1,681,500	26.87	27.70
Boston, . . . . .	1,140,111,500	1,106,999,700	978,848,300	56,898,600	57,473,200	—	72,301,680	6.34	6.38
Brookline, . . . . .	16,835,800	13,163,000	11,174,300	340,000	544,320	237,900	4,057,900	24.10	20.45
Brookline, . . . . .	47,972,500	45,356,000	26,043,700	12,692,356	11,771,229	342,100	5,813,744	12.19	15.08
Cambridge, . . . . .	111,960,000	104,427,900	81,162,874	12,911,805	10,739,294	840,200	10,194,920	9.10	11.05
Charlestown, . . . . .	78,299,000	75,909,000	49,359,999	15,460,840	17,000,376	882,300	9,103,987	11.02	11.45
Chelsea, . . . . .	84,742,000	31,242,000	20,670,500	4,392,519	4,101,750	533,614	7,525,527	21.06	19.31
Chicopee, . . . . .	7,984,750	6,986,000	5,437,000	437,476	390,560	60,000	1,256,174	15.02	15.93
Citizens' (Quincy), . . . . .	6,377,700	5,030,000	3,244,300	1,340,000	1,157,300	842,600	1,269,000	19.73	6.80
Citizens' (Wakefield), . . . . .	5,690,706	5,141,000	3,696,000	298,730	280,000	117,300	1,497,766	26.69	20.09
Clinton, . . . . .	8,137,870	8,655,870	6,752,400	39,003	638,240	250,580	1,075,887	13.22	19.81
Danvers, . . . . .	1,648,000	7,684,700	974,000	—	—	188,900	673,400	40.86	33.53
Dedham, . . . . .	7,777,500	7,962,100	5,508,500	848,792	809,100	188,900	1,230,768	15.83	25.03
Dorchester, . . . . .	50,125,000	45,709,100	24,046,400	18,259,776	17,624,677	289,200	6,630,024	13.22	11.84
East Boston, . . . . .	84,300,000	32,925,000	19,292,200	12,013,895	12,005,221	205,000	2,788,805	8.12	6.04
Easthampton, . . . . .	3,691,800	4,818,700	3,857,850	168,200	190,000	—	616,840	16.70	15.49
Fall River, . . . . .	46,395,000	44,397,600	37,555,300	2,828,653	3,153,167	259,900	5,611,147	12.15	13.03
Fitchburg, . . . . .	12,877,900	12,122,100	10,808,400	797,38.0	713,800	—	832,290	6.43	10.37
Gloucester, . . . . .	10,876,000	10,298,000	8,964,800	707,281	741,300	100,000	1,385,736	12.75	9.86
Greenfield, . . . . .	5,298,300	5,882,000	3,924,900	229,600	267,755	104,000	1,024,800	19.45	29.02
Haverhill, . . . . .	28,096,000	26,010,000	31,546,100	2,804,100	2,686,000	225,000	1,846,300	4.84	17.43
Jamaica Plain, . . . . .	28,592,300	28,127,200	15,147,600	8,891,138	8,732,779	415,200	3,606,402	13.88	11.18
Lawrence, . . . . .	13,773,865	11,224,800	65,980,275	61,827,764	838,248	—	7,389,390	10.00	6.12
Lowell, . . . . .	181,996,000	163,739,000	133,167,900	7,891,400	7,109,700	1,812,300	9,124,400	5.01	16.60
Lynde, . . . . .	50,762,300	46,826,500	39,986,500	2,465,800	2,241,900	748,400	7,601,600	14.89	13.63
Malden, . . . . .	29,911,900	25,716,700	19,085,700	2,859,400	2,964,900	250,300	3,480,900	12.90	11.72
Manufacturers' (Fall River), . . . . .	13,022,400	10,897,150	7,746,700	813,000	920,400	137,600	1,174,650	9.02	10.98
Marblehead, . . . . .	3,610,000	3,882,500	2,948,871	285,500	292,188	136,300	439,229	12.16	10.98
Marlborough, . . . . .	4,220,860	4,288,000	3,177,200	141,840	295,555	134,500	758,120	17.96	16.09

Milford	7,283,550	6,976,360	6,276,900	5,984,100	461,000	509,000	50,000	493,550	6.80	5.47
Miller's River (Athol)	2,404,000	2,175,000	1,755,000	1,690,500	390,000	425,000	60,000	193,000	8.12	8.51
Nantucket	2,381,000	2,447,210	1,602,600	1,631,640	457,120	426,000	42,500	218,730	9.18	12.93
Natick	2,974,500	2,999,800	2,587,000	2,587,000	114,900	129,000	99,900	198,500	6.67	6.27
New Bedford	44,314,100	43,608,300	34,498,500	32,383,500	5,900,000	7,100,000	400,000	3,755,000	8.43	8.65
Newburyport	9,356,630	8,612,424	7,108,100	6,405,800	106,700	1,123,500	258,000	922,930	9.86	9.64
Newton	42,276,000	39,399,900	28,603,395	28,603,395	6,722,400	6,244,000	416,800	3,920,500	9.17	10.42
North Adams	15,131,400	13,739,100	11,334,400	10,318,200	1,842,000	1,651,000	385,000	1,570,000	10.37	10.95
Northampton	9,993,200	9,442,100	8,711,800	7,960,577	—	366,644	60,000	1,293,400	12.24	11.17
North Attleborough	11,718,650	11,764,622	10,310,500	9,371,400	—	778,600	202,900	1,293,250	10.28	12.29
Norwood	—	—	793,250	484,200	—	—	c	—	—	—
Pittsfield	13,997,000	14,276,000	11,517,700	10,825,500	1,173,000	1,800,000	210,000	1,096,300	7.82	10.09
Plymouth	2,933,940	3,907,220	3,326,500	3,243,000	311,175	364,674	89,000	207,265	5.26	4.88
Roxbury	27,147,382,000	133,846,000	106,416,361	96,239,000	29,385,019	30,660,380	782,200	10,394,047	7.18	4.69
Salem	42,684,000	42,111,000	34,167,800	32,390,500	1,940,622	4,312,437	211,900	6,363,681	14.90	12.19
South Boston	60,399,000	55,768,929	42,670,991	38,099,200	12,280,568	12,079,243	341,000	5,010,451	8.31	9.49
Spencer <sup>d</sup>	—	—	—	—	—	—	—	—	—	—
Springfield	67,213,000	61,566,000	55,981,000	52,958,200	3,726,000	3,683,000	636,000	6,870,000	10.22	6.99
Taunton	29,620,000	25,396,000	27,256,700	22,694,400	1,266,700	1,100,000	604,400	492,900	1.66	4.46
Waltham	26,225,400	21,236,800	23,345,800	18,747,500	1,283,460	1,398,800	334,000	1,262,140	4.81	4.31
Westfield	5,494,000	5,519,300	4,524,900	4,274,950	308,000	519,320	57,000	604,700	11.00	12.13
Woburn	6,525,400	6,074,150	6,074,150	5,199,400	653,298	597,989	169,000	488,552	6.61	8.74
Worcester	87,613,600	81,807,700	75,668,100	69,443,000	4,785,600	5,138,100	920,200	6,223,700	7.11	7.86
Holyoke	42,966,000	41,231,000	38,216,200	36,021,000	4,11,940	391,000	433,700	3,874,800	9.02	10.36
Ware	4,276,030	4,171,750	3,691,800	3,486,100	252,885	184,627	64,300	287,045	6.71	10.32
Webster	2,230,570	2,156,760	91,193,500	1,079,100	245,000	290,900	71,900	820,170	36.76	37.30

## Oil-Gas Companies.

Amesbury	888,130	697,280	709,275	11,000	16,000	—	—	156,520	18.09	11.58
Amherst	710,000	731,403	670,000	42,390	40,000	—	—	—	—	—
Great Barrington	705,260	422,900	639,800	—	—	—	—	—	—	9.28
Iswich	i	1,162,250	1,231,200	—	—	—	—	—	—	—
Leominster	1,682,475	1,227,040	1,072,600	309,692	304,270	25,000	25,000	266,368	14.40	15.16
Lexington	730,000	545,210	530,000	200,000	200,000	10,000	30,000	30,000	3.82	—
Minut (Southbridge)	1,367,550	1,225,500	1,028,500	192,000	192,000	—	—	162,000	10.27	10.80
Chicopee Falls	1,608,763	1,550,500	1,374,210	—	—	—	—	—	—	—
Lee	i	203,652	i	—	—	—	—	33,448	14.10	—
Middleborough	1,002,725	806,650	—	—	13,000	—	—	i	—	12.27

<sup>a</sup> For 6 months to June 30, 1886. <sup>b</sup> For 4 months. <sup>c</sup> Quantity not given. <sup>d</sup> Includes 1,769,000 feet bought from the Boston Gas Light Company. <sup>e</sup> Works only three months in operation. <sup>f</sup> Includes 2,130,200 feet used in the mills of the company. <sup>g</sup> Includes 355,000 feet used in the mills of the company. <sup>h</sup> Quantity of gas bought. <sup>i</sup> Quantities not given. <sup>j</sup> Quantity of gas used in the mills of the company not known.

The following table shows the greatest and least daily output of each of the companies and the dates of the same : —

NAME OF COMPANY.	Greatest Output.	Date.	Least Output.	Date.
Adams, . . . . .	1 —	—	—	—
Amesbury, . . . . .	2 —	—	—	—
Amherst, . . . . .	2 —	—	—	—
Arlington, . . . . .	34,320	Dec. 24,	9,020	July 12
Attleborough, . . . . .	30,000	Jan. 28,	5,500	{ May 22 June 25
Beverly, . . . . .	34,100	Dec. 24,	8,700	June 26
Boston, . . . . .	5,685,866	Dec. 24,	918,006	July 25
Brockton, . . . . .	75,900	Dec. 23,	17,000	June 20
Brookline, . . . . .	209,800	Dec. 24,	65,0 0	July 6
Cambridge, . . . . .	542,000	Dec. 24,	101,400	Aug. 15
Charlestown, . . . . .	355,000	Dec. 23,	112,000	June 12
Chelsea, . . . . .	152,000	Dec. 25,	41,000	July 14
Chicopee, . . . . .	54,000	Dec. —	8,000	July —
Citizens' (Quincy), . . . . .	2 —	—	—	—
Citizens' (Wakefield), . . . . .	32,276	Nov. 18,	6,475	Aug. 1
Clinton, . . . . .	1 —	—	—	—
Cottage City, . . . . .	25,000	Aug. —	1,000	Jan. —
Danvers, . . . . .	7,522	Jan. 8,	1,796	July 6
Dedham, . . . . .	47,646	Nov. 29,	6,740	Aug. 8
Dorchester, . . . . .	215,600	Dec. 24,	66,250	July 7
East Boston, . . . . .	156,390	Dec. 24,	49,030	July 18
Easthampton, . . . . .	25,000	Dec. 20,	5,500	July 25
Fall River, . . . . .	308,400	Jan. 24,	49,800	June 5
Fitchburg, . . . . .	72,600	Dec. 24,	10,100	July 11
Gloucester, . . . . .	2 —	—	—	—
Great Barrington, . . . . .	2 —	—	—	—
Greenfield, . . . . .	29,300	Dec. 24,	5,000	July 5
Haverhill, . . . . .	210,000	Dec. 31,	49,000	June 30
Ipswich, . . . . .	3 —	—	—	—
Jamaica Plain, . . . . .	116,410	Dec. 2,	40,400	July 6
Lawrence, . . . . .	401,627	Dec. 16,	41,428	July 4
Leominster, . . . . .	1 —	—	—	—
Lexington, . . . . .	1 —	—	—	—
Lowell, . . . . .	1,218,000	Dec. 24,	132,000	July 14
Lynn, . . . . .	271,700	Dec. 24,	48,400	July 1
Malden, . . . . .	122,300	Dec. 14,	26,500	July 9
Manufacturers' (Fall River), . . . . .	97,300	Dec. 16,	12,300	May 8
Marblehead, . . . . .	22,071	Dec. 22,	3,721	June 5
Marlborough, . . . . .	22,000	Dec. —	4,000	June —
Milford, . . . . .	45,120	Dec. 24,	7,500	June 26
Miller's River (Athol), . . . . .	16,000	Dec. —	900	June —
Mutual (Southbridge), . . . . .	2 —	—	—	—
Nantucket, . . . . .	12,700	Aug. 27,	3,010	April 2
New Bedford, . . . . .	219,300	Dec. 23,	56,100	June 5
Newburyport, . . . . .	54,680	Dec. 24,	10,700	July 6
Newton, . . . . .	206,300	Dec. 25,	49,200	July 10
North Adams, . . . . .	88,000	Dec. 24,	16,000	June 27
Northampton, . . . . .	58,546	Nov. 30,	6,013	Aug. 17

<sup>1</sup> No record kept.<sup>2</sup> Not returned.<sup>3</sup> No station meter.

NAME OF COMPANY.	Greatest Output.	Date.	Least Output.	Date.
North Attleborough, . . .	58,202 <sup>2</sup>	Jan. 25,	8,786	Sept. 13
Norwood, . . . . .	—	—	—	—
Pittsfield, . . . . .	62,000	Dec. 24,	23,000	July 20
Plymouth, . . . . .	20,200	Dec. 24,	5,650	July 4
Roxbury, . . . . .	699,650	Dec. 24,	174,000	July 11
Salem, . . . . .	198,000	Dec. 23,	54,000	July 7
South Boston, . . . . .	288,592	Dec. 24,	90,420	June 12
Spencer, . . . . .	<sup>3</sup> 31,790	Mar. 31,	8,600	Mar. 1
Springfield, . . . . .	369,000	Dec. 25,	65,000	July 12
Taunton, . . . . .	<sup>1</sup> —	—	—	—
Waltham, . . . . .	170,000	Dec. 8,	22,400	June 5
Westfield, . . . . .	29,300	Dec. 24,	6,100	Aug. 1
Woburn, . . . . .	37,000	Dec. 30,	12,000	July 7
Worcester, . . . . .	490,600	Dec. 24,	100,400	June 12
Chicopee Falls, . . . . .	<sup>1</sup> —	—	—	—
Holyoke, . . . . .	244,051	Dec. 22,	39,589	July 25
Lee, . . . . .	<sup>2</sup> —	—	—	—
Middleborough, . . . . .	<sup>2</sup> —	—	—	—
Ware, . . . . .	35,710	Nov. 8,	2,080	July 12
Webster, . . . . .	<sup>2</sup> —	—	—	—

<sup>1</sup> No record kept.<sup>2</sup> Not returned.<sup>3</sup> Works started in March.

The following tables show the total quantity of gas sold during the year ending June 30, 1887; the percentage of increase in sales over the previous year; the capital (including bonds) per thousand feet sold; the average price received for all gas sold during the year ending June 30, 1887, and the average price received the year previous: —

*Coal-Gas Companies.*

[Boldface figures show decrease.]

NAME OF COMPANY.	Total Sales of Gas.	Increase over 1885-86. Per cent.	Capital per M sold, including Bonds.	Average price received per M for gas sold, 1886-87.	Average price received per M for gas sold, 1885-86.
	Feet.				
Adams, . . . .	5,972,089	11.67	\$2.896	\$2.41	\$2.46
Arlington, . . . .	5,427,700	<b>.14</b>	12.896	3.00	3.01
Attleborough, . . . .	5,404,800	20.79	5.032	2.25	2.25
Beverly, . . . .	4,496,300	9.71	11.520	2.59	2.84
Boston, . . . .	1,067,809,810	3.03	2.185	1.45	1.47
Brockton, . . . .	12,540,000	7.00	7.895	2.24	2.12
Brookline, . . . .	41,726,656	10.34	9.706	2.18	2.38
Cambridge . . . .	100,954,880	9.85	6.776	1.69	1.72
Charlestown, . . . .	68,311,613	2.94	7.319	1.72	1.71
Chelsea, . . . .	26,682,859	7.70	11.243	2.12	2.31
Chicopee, . . . .	6,688,576	14.97	4.485	2.30	2.39
Citizens' (Quincy), . . . .	4,765,200	8.26	9.653	2.44	2.46
Citizens' (Wakefield), . . . .	3,994,730	.16	23.856	3.36	3.39
Clinton, . . . .	6,811,403	<b>.61</b>	5.137	2.19	2.18
Cottage City, . . . .	—	—	—	—	—
Danvers, . . . .	974,600	<b>2—</b>	22.573	3.27	3.01
Dedham, . . . .	6,357,692	10.12	17.459	2.82	3.00
Dorchester, . . . .	43,206,176	8.02	9.258	2.14	2.27
East Boston, . . . .	31,306,095	1.90	7.027	1.81	1.91
Easthampton, . . . .	3,050,050	<b>24.63</b>	9.836	2.68	2.80
Fall River, . . . .	40,393,953	5.48	7.130	1.76	1.83
Fitchburg, . . . .	11,665,700	11.37	5.143	1.90	2.14
Gloucester, . . . .	9,389,264	3.11	6.635	2.01	2.24
Greenfield, . . . .	4,164,500	1.81	11.725	2.59	2.65
Haverhill, . . . .	36,024,700	5.20	2.082	1.60	1.68
Jamaica Plain, . . . .	24,046,438	5.81	9.981	2.15	2.25
Lawrence, . . . .	65,980,275	5.28	6.062	1.43	1.48
Lowell, . . . .	171,059,300	12.50	2.923	1.29	1.38
Lynn, . . . .	42,452,300	10.55	7.066	1.83	2.00
Malden, . . . .	23,180,700	5.12	9.491	2.16	2.31
Manufacturers' (Fall River), . . . .	11,710,150	21.23	4.270	1.71	1.77
Marblehead, . . . .	3,034,371	<b>7.15</b>	13.677	2.81	2.88
Marlborough, . . . .	3,328,240	<b>4.16</b>	15.023	2.70	2.75
Milford, . . . .	6,737,900	2.82	10.730	1.98	2.02
Miller's River, (Athol), . . . .	2,145,000	<b>2—</b>	27.972	2.40	1.90
Nantucket, . . . .	2,119,720	1.53	16.983	2.80	2.82
Natick, . . . .	2,676,100	<b>1.49</b>	11.210	2.81	2.91

<sup>1</sup> Quantity not given.

<sup>2</sup> Previous return for six months only.



*Coal-Gas Companies — Concluded.*

NAME OF COMPANY.	Total Sales of Gas.	Increase over 1885-86. Per cent.	Capital per M sold, including Bonds.	Average price received per M for gas sold, 1887-86.	Average price received per M for gas sold, 1885-86.
	Feet.				
New Bedford, . . .	40,358,500	2.21	\$6.839	\$1.63	\$1.69
Newburyport, . . .	8,175,100	8.48	9.786	2.13	2.29
Newton, . . .	37,939,200	8.68	5.270	2.25	2.36
North Adams, . . .	13,176,400	11.01	4.098	1.96	2.01
Northampton, . . .	8,711,800	4.59	5.739	2.10	2.39
North Attleborough, .	10,310,500	2.53	13.210	2.47	2.56
Norwood, . . .	793,250	63.82	15.126	2.52	2.65
Pittsfield, . . .	12,690,700	.51	5.739	2.01	2.01
Plymouth, . . .	3,637,675	.83	10.996	2.27	2.51
Roxbury, . . .	136,005,153	7.15	4.412	1.73	1.72
Salem, . . .	36,108,419	<b>1.62</b>	8.308	1.80	2.00
South Boston, . . .	54,951,549	9.59	8.390	1.78	1.91
Spencer, . . .	—	—	—	—	—
Springfield, . . .	59,707,000	5.41	8.221	1.94	2.09
Taunton, . . .	28,523,100	20.32	2.818	1.59	1.48
Waltham, . . .	24,629,260	22.25	6.902	1.92	1.92
Westfield, . . .	4,832,900	.80	11.173	2.33	2.69
Woburn, . . .	6,727,448	16.04	6.704	2.07	2.15
Worcester, . . .	80,453,700	7.87	6.073	1.82	1.92
Holyoke, . . .	37,727,040	6.15	—	1.97	2.11
Ware, . . .	1,794,385	19.74	—	<sup>2</sup> 2.55	<sup>2</sup> 2.91
Webster, . . .	983,500	4.73	—	<sup>2</sup> 3.33	<sup>2</sup> 3.60

*Oil-Gas Companies.*

Amesbury, . . .	708,280	<b>9.80</b>	\$1.764	\$3.25	\$3.25
Amherst, . . .	773,793	8.98	14.862	5.39	5.60
Great Barrington, . .	422,900	<b>33.90</b>	11.823	4.47	3.55
Ipswich, . . .	1,162,250	<b>12.69</b>	19.789	2.72	3.56
Leominster, . . .	1,546,732	12.33	32.326	5.06	5.00
Lexington, . . .	745,210	2.08	31.228	4.84	4.98
Mutual (Southbridge), .	1,425,300	16.82	10.598	3.00	3.26
Chicopee Falls, . . .	550,500	49.79	—	<sup>5</sup> 4.79	<sup>5</sup> 4.62
Lee, . . .	203,652	<sup>4</sup> —	—	7.50	7.50
Middleborough, . . .	<sup>3</sup> —	—	—	—	4.32

<sup>1</sup> Works in operation only three months.    <sup>2</sup> Average price for gas sold to the public.

<sup>3</sup> Quantity not given.

<sup>4</sup> Quantity last year not returned.

<sup>5</sup> Average price to private consumers.

The following tables show the capital (including bonds), the gas sold, the gas unaccounted for, and the number of consumers per mile of main ; also, the gas sold per consumer and per meter light : —

*Coal-Gas Companies.*

NAME OF COMPANY.	PER MILE OF MAIN.				Gas sold per Consumer.	Gas sold per Meter Light.
	Capital.	Gas sold.	Gas unaccounted for.	Number of Consumers.		
Adams, .	\$3,460	Feet. 1,194,416	Feet. 134,584	29.6	Feet. 36,128	Feet. 3,555
Arlington, .	3,477	269,682	77,402	16.8	13,340	2,256
Attleborough, .	7,727	1,535,453	126,903	58.8	26,105	5,009
Beverly, .	8,824	765,979	286,456	60.4	11,392	2,498
Boston, .	19,613	8,311,097	562,746	209.7	37,507	3,609
Brookton, .	1	—	—	—	19,002	3,075
Brookline, .	8,106	835,203	116,968	26.6	21,813	2,913
Cambridge, .	8,974	1,294,296	130,701	60.0	18,784	3,302
Charlestown, .	12,966	1,771,366	236,127	92.4	14,820	3,040
Chelsea, .	6,788	603,831	170,199	31.4	16,036	3,014
Chicopee, .	6,696	1,490,052	275,332	31.4	44,334	2,889
Citizens' (Quincy), .	6,571	680,742	181,414	35.5	13,756	2,915
Citizens' (Wakefield), .	4,765	199,731	74,883	15.5	11,844	1,558
Clinton, .	6,542	1,273,159	201,100	36.8	34,276	1,793
Cottage City, .	2	—	—	47.2	—	—
Danvers, .	8,301	371,547	254,112	32.8	11,202	1,509
Dedham, .	9,304	532,916	102,928	23.0	20,032	2,682
Dorchester, .	8,364	903,517	138,645	39.0	13,368	2,517
East Boston, .	13,090	1,803,458	166,000	73.1	15,697	3,883
Easthampton, .	8,241	837,920	169,461	49.7	15,756	1,467
Fall River, .	16,695	2,347,476	327,777	58.9	36,927	2,650

Fitchburg,	5,474	1,064,390	75,930	46.5	21,310	2,680
Gloucester,	9,108	1,372,700	202,749	77.4	16,381	3,841
Greenfield,	13,020	1,084,505	268,177	63.2	16,193	3,887
Haverhill,	5,387	2,588,982	132,036	110.4	21,603	3,769
Jamaica Plain,	9,426	944,480	155,757	37.1	15,995	2,662
Lawrence,	14,936	2,463,789	275,593	71.2	34,382	4,781
Lowell,	7,652	2,618,383	139,666	96.7	25,809	3,422
Lynn,	13,489	1,908,827	340,000	78.6	23,489	4,080
Malden,	4,813	2,507,125	76,152	28.0	15,876	2,523
Manufacturers' (Fall River),	11,111	2,602,256	261,033	41.5	58,273	2,217
Marblehead,	12,029	879,527	137,341	58.5	13,608	1,907
Marlborough,	25,000	1,664,120	379,060	78.0	20,425	2,344
Millford,	10,616	989,412	72,782	59.0	15,614	2,492
Miller's River (Athol),	23,346	834,630	75,875	45.9	14,873	2,510
Nantucket,	7,438	437,958	45,192	36.1	9,446	2,240
Natick,	8,498	758,102	56,232	52.9	13,696	1,657
New Bedford,	10,222	1,491,321	139,096	78.7	16,374	3,157
Newburyport,	10,810	1,104,743	124,720	57.4	17,336	2,920
Newton,	3,543	672,085	69,450	30.1	18,352	3,168
North Adams,	5,775	1,406,226	167,556	42.6	28,336	3,553
Northampton,	5,915	1,030,982	144,781	43.3	23,803	3,514
North Attleborough,	15,782	1,194,727	139,426	38.2	31,244	4,122
Norwood,	8,434	1,712,645	147,948	83.0	21,169	1,399
Pittsfield,	13,513	1,228,942	70,020	70.2	18,720	4,751
Plymouth,	9,063	2,034,464	160,040	86.8	15,992	2,441
Roxbury,	12,082	1,454,225	236,290	91.1	18,507	3,454
Salem,	17,312	2,008,185	188,801	76.7	15,091	3,192
South Boston,	15,690	<sup>3</sup> —	—	24.6	20,927	4,115
Spencer,	14,116	1,685,686	193,958	78.0	—	—
Springfield,					20,259	3,194

<sup>1</sup> No return of length of mains.

<sup>2</sup> No return of quantity of gas sold.

<sup>3</sup> Works in operation for three months only.

*Coal-Gas Companies — Concluded.*

NAME OF COMPANY.	PER MILE OF MAIN.				Gas sold per Consumer.	Gas sold per Meter Light.
	Capital.	Gas sold	Gas unaccounted for.	Number of Consumers.		
Taunton, .	\$5,141	Feet. 1,833,123	Feet. 31,632	65.8	Feet. 26,617	Feet. 3,208
Waltham, .	11,676	1,691,570	86,486	49.2	32,560	4,551
Westfield, .	10,609	949,489	118,801	54.7	16,214	3,073
Woburn, .	9,761	1,456,157	105,747	77.9	16,872	3,086
Worcester, .	14,005	2,253,605	174,613	97.5	21,667	4,279
Holyoke, .	—	2,513,460	258,151	73.2	32,775	3,657
Ware, .	—	1,952,544	142,808	50.2	34,453	2,730
Webster, .	—	575,400	328,068	52.4	9,110	1,865

*Oil-Gas Companies.*

Amesbury, .	\$1,237	701,267	—	79.2	8,716	2,517
Anherst, .	3,002	202,035	—	29.5	6,472	1,508
Great Barrington, .	4,000	338,320	—	50.4	6,712	1,208
Ipswich, .	8,333	421,050	—	28.9	14,528	1,332
Leominster, .	7,692	237,959	40,979	30.9	6,154	1,267
Lexington, .	9,778	313,113	12,605	36.1	6,339	1,637
Mutual (Southbridge), .	7,978	758,138	86,170	79.7	8,148	1,486
Chicopee Falls, .	—	1,544,554	—	61.3	8,879	1,643
Lee, .	—	154,281	25,339	53.0	2,909	904
Middleborough, .	—	2 —	—	—	—	—

<sup>1</sup> Includes only gas sold to private consumers.<sup>2</sup> Owing to the death of the owner of these works the return is very incomplete.

The following table shows the number of tons of coals carbonized in 1886-87 and 1885-86, the kind and quantities of enricher used by the various coal-gas companies, and the percentage of cost of coal received from residuals:—

NAME OF COMPANY.	Number of tons of coal carbonized, year		Enricher used.	Cannel. Tons.	Naphtha. Gallons.	Residuum. Barrels.	Oil. Gallons.	Percentage of cost of coal received from residual products.
	1887.	1886.						
Adams, . . . . .	666	624	Oil, . . . . .	—	—	—	—	30.56
Arlington, . . . . .	652	730	Crude oil, . . . . .	—	—	—	980	19.69
Attleborough, . . . . .	639	518	Cannel, . . . . .	—	—	—	654	16.16
Beverly, . . . . .	687	714	Cannel coal, albertite, naphtha, . . . . .	—	—	—	—	22.92
Boston, . . . . .	100,882	100,755	Naphtha, . . . . .	2,249	708,238	—	—	31.90
Brockton, . . . . .	1,593	1,416	Cannel and naphtha, . . . . .	—	10,366	—	—	24.24
Brookline, . . . . .	4,038	3,888	Petroleum oil, . . . . .	168	18,362	—	—	29.88
Cambridge, . . . . .	9,397	8,760	Naphtha, . . . . .	—	1 2,673	—	41,252	33.31
Charlestown, . . . . .	6,375	6,714½	Gas oil, . . . . .	—	—	—	—	45.82
Chelsea, . . . . .	3,548	3,221	Cannel, . . . . .	15	—	—	10,810	38.44
Chillicothe, . . . . .	724	577	Naphtha, rosin, . . . . .	—	2 2,500	—	—	19.69
Citizens' (Quincy), . . . . .	625½	441	Oil, . . . . .	—	—	—	—	10.06
Citizens' (Wakefield), . . . . .	702	642	—	—	—	—	—	5.57
Clinton, . . . . .	734	755	—	—	—	—	3,697	22.09
Danvers, . . . . .	168	8 101	—	—	—	—	—	10.95
Dedham, . . . . .	798½	760	Residuum, . . . . .	—	—	12	—	19.51
Dorchester, . . . . .	4,635	4,026½	Cannel chips, gas oil, . . . . .	159½	—	—	7,493	22.68
East Boston, . . . . .	3,267	3,364	Cannel, residuum, . . . . .	71	—	69	—	28.12
Easthampton, . . . . .	418	449	Cannel, residuum, . . . . .	14½	—	4	—	8.54
Fall River, . . . . .	3,879	4,143	Naphtha, cannel, . . . . .	10	27,472	—	—	29.27
Fitchburg, . . . . .	876	1,056	Cannel, gas oil, . . . . .	5½	—	—	—	24.27
Gloucester, . . . . .	968½	947	Cannel, . . . . .	12½	—	—	1,933	32.37
Greenfield, . . . . .	533	612	—	—	—	—	—	8.51
Haverhill, . . . . .	4,089	3,923	Cannel, . . . . .	—	—	—	—	29.76
Holyoke, . . . . .	3,716	3,943	—	170	—	—	—	37.09
Jamaica Plain, . . . . .	2,610	2,588	Cannel, . . . . .	151	—	—	—	31.04

1 Not including amount used in the manufacture of water-gas.      2 About 11,000 pounds of rosin used.      3 For six months to June 30, 1886.

NAME OF COMPANY.	Number of tons of coal carbon- ized, year ending June ending June 30, 1887.	Number of tons of coal carbon- ized, year ending June ending June 30, 1886.	Enricher used.	Cannel. Tons.	Naphtha. Gallons.	Residu- um. Barrels.	Oil. Gallons.	Percentage of cost of coal re- ceived from residual products.
Lawrence, . . . . .	6,361	5,983	Cannel, naphtha, . . . . .	271	8,200	-	-	43.02
Lowell, . . . . .	17,327	15,171	Cannel, naphtha, . . . . .	15	69,473	-	-	53.61
Lynn, . . . . .	4,309	3,863	Naphtha, . . . . .	-	110,267	-	-	35.29
Malden, . . . . .	2,781½	2,218½	Cannel, gas oil, . . . . .	84	-	-	5,076	25.63
Manufacturers' (Fall River), . . . . .	1,081	1,000	Cannel, . . . . .	70	-	-	-	17.56
Marblehead, . . . . .	366¾	385	- . . . .	-	-	-	-	3.10
Marlborough, . . . . .	368	462	Naphtha, gas oil, . . . . .	-	11,441	-	5,315	9.10
Milford, . . . . .	805	757	- . . . .	-	-	-	-	34.73
Milford, . . . . .	237¾	240	- . . . .	-	-	-	-	3.63
Nantucket, . . . . .	326	303	Naphtha, gas oil, . . . . .	-	49	-	637	26.30
Natick, . . . . .	4,124	4,029	Cannel, naphtha, . . . . .	82	4,170	-	-	47.88
New Bedford, . . . . .	883	860	Cannel, oil, . . . . .	21½	-	-	-	10.73
Newburyport, . . . . .	3,078	3,320	Cannel, oil, . . . . .	-	-	-	2,357	29.43
Newton, . . . . .	1,292	1,200	Cannel, naphtha, . . . . .	53	4,710	-	25,562	21.76
North Adams, . . . . .	909	814½	Cannel, naphtha, . . . . .	23	4,927	-	-	14.11
Northampton, . . . . .	1,061	1,068	Gas oil, . . . . .	-	-	-	1,161	32.83
North Attleborough, . . . . .	100	125	- . . . .	-	-	-	-	-
Norwood, . . . . .	1,020½	900	Cannel, . . . . .	165	-	-	-	23.48
Pittsfield, . . . . .	352	347	Cannel, residuum, . . . . .	25½	-	15½	-	4.56
Plymouth, . . . . .	13,094	12,003	Naphtha, . . . . .	-	84,544	-	-	35.85
Roxbury, . . . . .	3,377	3,334	Cannel, . . . . .	336	-	-	-	28.38
Salem, . . . . .	5,703	5,100	Cannel, petroleum, residuum, . . . . .	6	-	196	-	34.12
South Boston, . . . . .	2	-	- . . . .	-	-	-	-	-
Spencer, . . . . .	5,471	5,000	Cannel, . . . . .	436	-	-	-	37.20
Springfield, . . . . .	2,868	2,415	Gas oil, . . . . .	7½	7,162	-	2,976	15.43
Taunton, . . . . .	2,454	1,921	Cannel, naphtha, . . . . .	-	-	-	-	27.75
Waltham, . . . . .	446	391	Cannel, . . . . .	38	-	-	-	13.03
Ware, . . . . .	233	245	- . . . .	-	-	-	-	0.83
Webster, . . . . .	470	450	Cannel, oil, . . . . .	12	-	-	-	28.88
Westfield, . . . . .	726¼	626	Cannel, oil, . . . . .	-	-	-	5,021	40.20
Woburn, . . . . .	6,656	6,333	Naphtha, . . . . .	-	169,733	-	-	26.58
Worcester, . . . . .								

<sup>1</sup> Not including amount used in the manufacture of water-gas.

<sup>2</sup> Not returned.

The following tables show the materials and quantity of each used in the manufacture of water and oil-gas, also the process used and the quantity of water-gas made : —

*Water-Gas.*

NAME OF COMPANY.	Process used.	Materials used in Generator.	Quantity used. Tons.	Enricher used.	Quantity used. Gallons.	Gas made Feet.
Charlestown, . . .	Granger,	Coke, . . .	<sup>1</sup> 180	Naphtha,	49,897	8,548,800
Cottage City, <sup>2</sup> . . .	Loomis,	—	—	—	—	—
Lynn, . . .	Granger,	Coke, . . .	<sup>3</sup> —	Naphtha,	14,596	2,564,500
Miller's River (Athol),	Granger,	Anthracite,	<sup>4</sup> 84	Naphtha,	11,500	2,400,000
Worcester, . . .	Granger,	Coke, . . .	<sup>5</sup> 168	Naphtha,	94,830	14,891,000
		Anthracite,	106			

<sup>1</sup> Coke used for making steam; quantity not known.

<sup>2</sup> Quantities not given.

<sup>3</sup> One to one and a half bushels per thousand feet used in the generator. Coke used for making steam; quantity not given.

<sup>4</sup> Thirty-six tons of coal used in addition to this, for generating steam.

<sup>5</sup> About one-sixth of a bushel per thousand feet used for generating steam.

*Oil-Gas.*

NAME OF COMPANY.	Materials used.	Quantity used. Gallons.	Fuel used.	Quantity used.
Amesbury, <sup>1</sup> . . . . .	—	—	—	—
Amherst, . . . . .	Naphtha, . . .	11,034	Coke, . . . . .	1,948 bu.
Great Barrington, <sup>1</sup> . . . . .	—	—	—	—
Ipswich, . . . . .	Petroleum, . . .	24,000	Franklin coal, . . .	70 tons.
Leominster, . . . . .	Petroleum, . . .	18,185	Cumberland coal, . . .	91 tons.
Lexington, . . . . .	Petroleum, . . .	11,685	Anthracite, . . . . .	70½ tons.
Mutual (Southbridge), . . . . .	Petroleum, . . .	9,893	Anthracite, <sup>2</sup> . . . . .	49 tons.
Chicopee Falls, . . . . .	Petroleum, . . .	20,865	Anthracite, . . . . .	65½ tons.
Lee, . . . . .	Petroleum, . . .	4,742	Coke, <sup>3</sup> . . . . .	1,500 bu.
Middleborough, . . . . .	Gas oil, . . . .	4—	Coke, . . . . .	—

<sup>1</sup> No gas made.

<sup>2</sup> Two and a half cords of wood used also.

<sup>3</sup> Four cords of wood used also.

<sup>4</sup> Quantities not returned.

The following table shows the number of retorts, the average number of the same employed in winter and in summer, and the average number of men employed in winter and in summer :—

*Coal-Gas Works.*

NAME OF COMPANY.	Number of Retorts.	AVERAGE NUMBER OF RETORTS EMPLOYED.		AVERAGE NUMBER OF MEN EMPLOYED.	
		Winter.	Summer.	Winter.	Summer.
Adams, . . . . .	10	10	5	3	3
Arlington, . . . . .	11	6	5	6	4
Attleborough, . . . . .	13	6	3	3	3
Beverly, . . . . .	11	8	3	4	3
Boston, . . . . .	762	522	315	528	388
Brockton, . . . . .	18	11	8	5	5
Brookline, . . . . .	48	24	12	10	6
Cambridge, . . . . .	90	52	26	31	25
Charlestown, . . . . .	72	33 $\frac{1}{3}$	21	15	13
Chelsea, . . . . .	35	20	15	12	9
Chicopee, . . . . .	16	10	3	4	2
Citizens' (Quincy), . . . . .	8	5 $\frac{4}{10}$	2 $\frac{2}{3}$	3	3
Citizens' (Wakefield), . . . . .	12	6	3	5	4
Clinton, . . . . .	18	15	3	4	2
Danvers, . . . . .	4	2	1	2	2
Dedham, . . . . .	15	10	5	3	2
Dorchester, . . . . .	58	36	26	29	36
East Boston, . . . . .	45	22	12	10	6
Easthampton, . . . . .	9	6	3	2 $\frac{1}{2}$	2
Fall River, . . . . .	105	37	17	19	10
Fitchburg, . . . . .	20	10	5	6	4
Gloucester, . . . . .	15	6	3	5	4
Greenfield, . . . . .	6	6	3	2 $\frac{1}{4}$	2
Haverhill, . . . . .	48	25	13	11	9
Jamaica Plain, . . . . .	30	17	12	10	10
Lawrence, . . . . .	137	48	24	30	20
Lowell, . . . . .	144	108	60	121	86
Lynn, . . . . .	48	26	15	12	9
Malden, . . . . .	24	18	12	9	7
Manufacturers' (Fall River), . . . . .	33	18	5	6	2
Marblehead, . . . . .	9	3	3	3	2
Marlborough, . . . . .	15	5	3	3	3
Milford, . . . . .	17	11	6	5	4
Nantucket, . . . . .	7	3	4	3	3
Natick, . . . . .	7	3	3	2	2
New Bedford, . . . . .	42	30	18	15	11
Newburyport, . . . . .	12	6	3	4	4
Newton, . . . . .	34	22	12	7	4
North Adams, . . . . .	19	14	6	5	3
Northampton, . . . . .	13	12	8	5	4
North Attleborough, . . . . .	17	5 $\frac{3}{8}$	3 $\frac{1}{2}$	5	4
Norwood, . . . . .	7	3	3	3	3
Pittsfield, . . . . .	17	6 $\frac{1}{2}$	5 $\frac{1}{2}$	3	2
Plymouth, . . . . .	5	3	2	2	2
Roxbury, . . . . .	145	80	54	50	37



NAME OF COMPANY.	Number of Retorts.	AVERAGE NUMBER OF RETORTS EMPLOYED.		AVERAGE NUMBER OF MEN EMPLOYED.	
		Winter.	Summer.	Winter.	Summer.
Salem, . . . . .	55	28 $\frac{1}{3}$	18 $\frac{1}{3}$	14 $\frac{1}{9}$	9 $\frac{1}{3}$
South Boston, . . . . .	108	36	27	22	23 $\frac{1}{3}$
Spencer, . . . . .	5	5	5	3	3
Springfield, . . . . .	72	32	19	19	15
Taunton, . . . . .	35	27	15	14	10
Waltham, . . . . .	33	21	9	16	16
Westfield, . . . . .	9	6	3	3	3
Woburn, . . . . .	12	6	3	5	2
Worcester, . . . . .	48	35 $\frac{1}{2}$	13	42 $\frac{2}{3}$	28
Holyoke, . . . . .	36	24	13	13	10 $\frac{1}{3}$
Ware, . . . . .	7	2	1	5	3
Webster, . . . . .	6	3	3	2	1

*Oil-Gas Works.*

Amesbury, <sup>1</sup> . . . . .	—	—	—	—	—
Amherst, . . . . .	12	—	—	1	1
Great Barrington, <sup>1</sup> . . . . .	—	—	—	—	—
Ipswich, . . . . .	5	—	—	1	1
Leominster, . . . . .	3	—	—	1	1
Lexington, . . . . .	4	—	—	1	1
Mutual (Southbridge), . . . . .	8	—	—	1	1
Chicopee Falls, . . . . .	12	—	—	1 $\frac{1}{2}$	1
Lee, . . . . .	4	—	—	1	1
Middleborough, . . . . .	3	—	—	1	1

<sup>1</sup> Gas bought, not made.

## STREET MAINS.

The following table shows the lengths and sizes of the mains as returned by the companies. These figures are probably more nearly correct than those in the last report, which were estimated by many of the companies that have since made measurements. On account of this fact it is quite difficult to determine the increase in the length of street mains; but in comparing those returns of the two years which are apparently correct, there is an increase of more than ten miles of six-inch main and but a few hundred feet of two-inch and smaller pipe, showing a tendency on the part of the companies to lay larger pipe.

NAME OF COMPANY.	DIAMETER IN INCHES.													Total Length in Feet.	LENGTH IN MILES AND FEET.		Increasing Year.			
	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16		18	24				
Adams, . . . . .	-	-	-	5,280	-	10,560	2,640	7,920	-	-	-	-	-	-	-	26,400	5	-	3,000	
Amesbury, . . . . .	-	-	300	4,500	-	800	-	-	-	-	-	-	-	-	-	5,600	1	320	-	
Amherst, . . . . .	-	1,800	-	8,775	-	9,681	-	-	-	-	-	-	-	-	-	20,256	3	4,416	-	
Arlington, . . . . .	-	-	-	95,000	-	95,000	2,000	9,300	-	-	-	-	-	-	-	106,300	20	700	-	
Attleborough, . . . . .	-	900	-	2,000	-	3,000	9,000	3,614	-	-	-	-	-	-	-	18,514	3	2,774	114	
Beverly, . . . . .	-	-	-	9,530	-	15,440	5,550	-	550	-	-	-	-	-	-	31,070	5	4,630	-	
Boston, . . . . .	-	-	-	2,391	-	196,943	102,805	210,157	21,076	28,046	67,974	-	-	27,854	3,341	1	678,345	128	2,565	
Brookline, . . . . .	-	-	-	-	-	117,529	62,455	36,290	11,367	4,950	1,120	900	-	-	-	4	-	-	-	
Brookline, . . . . .	6,827	12,400	4,631	5,260	-	-	-	-	-	-	-	-	-	-	-	263,789	49	5,069	9,711	
Cambridge, . . . . .	-	-	-	-	-	132,501	24,061	16,820	5,773	2,585	5,531	-	-	-	-	411,797	77	5,237	2,958	
Charlestown, . . . . .	-	3,396	-	12,683	-	95,040	52,800	26,400	52,800	1,000	-	-	-	-	-	203,653	38	3,013	3,823	
Chelsea, . . . . .	-	-	-	5,280	-	5,280	2,640	2,640	-	-	-	-	-	-	-	233,290	44	1,000	-	
Chicopee, . . . . .	-	-	-	5,280	-	5,280	1,700	8,000	9,000	1,023	-	-	-	-	-	23,600	4	2,940	-	
Citizens' (Lynn), . . . . .	-	-	-	-	250	-	-	-	-	-	-	-	-	-	-	6	22,773	4	1,653	
Citizens' (Quincy), . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*	7	-	-	
Citizens' (Wakefield), . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*	20	-	-	
Citizens' (Wakefield), . . . . .	-	-	-	1,300	-	12,100	5,625	5,850	-	1,280	-	720	-	-	-	28,250	5	1,850	2,000	
Cottage City, . . . . .	-	-	1,375	-	-	2,252	5,665	2,013	975	-	-	-	-	-	-	10,905	2	345	-	
Danvers, . . . . .	-	-	-	2,403	-	7,226	3,750	657	-	-	-	-	-	-	-	14,036	2	3,476	-	
Dedham, . . . . .	-	3,600	-	6,800	-	25,342	8,533	18,681	-	-	-	-	-	-	-	63,006	11	4,926	-	
Dorchester, . . . . .	-	2,984	-	2,387	-	126,237	74,101	25,700	7,800	8,100	-	-	75	-	-	252,484	47	4,824	2,070	
East Boston, . . . . .	-	-	-	2,400	-	47,650	32,975	4,400	5,400	950	4,900	-	-	-	-	98,675	16	4,195	9,136	
Easthampton, . . . . .	600	-	-	8,490	-	2,500	7,160	500	-	-	-	-	-	-	-	19,250	3	3,410	3,175	
Fall River, . . . . .	-	-	-	-	-	26,434	4,185	36,240	20,549	1,500	-	-	2,200	-	-	91,108	17	1,348	1,596	
Fitchburg, . . . . .	-	-	-	4,000	-	41,100	3,000	4,000	5,000	200	-	-	-	-	-	57,900	10	5,100	2,900	
Gloucester, . . . . .	-	-	-	-	-	27,675	5,500	1,200	1,000	-	-	-	-	-	-	36,125	6	4,445	1,525	
Gloucester, . . . . .	-	-	750	-	-	1,320	3,960	1,200	-	-	-	-	-	-	-	6,600	1	1,320	-	
Great Barrington, . . . . .	-	-	-	1,320	-	9,821	2,640	2,640	200	-	-	-	-	-	-	20,317	3	4,477	-	
Greenfield, . . . . .	-	-	-	5,016	-	38,528	4,800	17,949	-	4,025	-	-	-	-	-	73,522	13	4,882	6,095	
Haverhill, . . . . .	-	-	-	7,220	-	950	-	1,000	-	-	-	-	-	-	-	14,000	2	4,040	650	
Ipswich, . . . . .	2,000	-	300	10,350	-	76,387	11,463	10,575	591	-	-	-	-	-	-	134,448	25	2,444	23,448	
Janua Plain, . . . . .	-	-	975	7,125	-	91,651	6,226	23,182	8,112	2,628	9,163	-	434	-	-	141,396	26	4,116	5,160	
Lawrence, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	* 6	2,640	-	
Leominster, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lexington, . . . . .	-	1,000	1,400	7,000	-	77,899	1,500	72,062	8,223	7,516	6,681	1,000	348	-	-	12,000	2	2,040	600	
Lowell, . . . . .	2,281	-	485	90,999	-	68,004	41,182	14,519	3,337	4,562	4,600	-	-	-	-	2	344,970	65	1,170	43,007
Lynn, . . . . .	837	2,409	2,375	4,525	-	35,787	41,182	14,519	3,337	4,562	4,600	-	3,325	-	-	117,458	22	1,298	5,644	

Malden, Manufacturers' (Fall River),	-	-	-	-	128,698	73,920	86,960	-	1,800	-	-	-	-	-	-	-	-	-	241,378	45	3,778	1,978
Marblehead,	-	150	-	-	8,080	1,800	6,500	-	-	-	-	-	-	-	-	-	-	-	-	* 4	2,640	-
Marlborough,	-	-	-	-	6,578	2,000	1,242	-	-	-	-	-	-	-	-	-	-	-	-	3	2,375	1,865
Milford,	-	1,200	-	-	8,500	9,000	13,000	-	-	-	-	-	-	-	-	-	-	-	-	2	1,079	500
Miller's River (Athol),	2,000	600	-	-	4,000	1,000	5,000	-	-	-	-	-	-	-	-	-	-	-	-	6	4,320	300
Mutual (Southbridge),	-	-	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3,040	600
Nantucket,	-	-	-	-	8,095	-	1,325	-	-	-	-	-	-	-	-	-	-	-	-	1	4,640	1,270
Natick,	-	-	-	-	13,640	1,770	3,030	-	-	-	-	-	-	-	-	-	-	-	-	4	4,460	-
New Bedford,	-	1,600	-	-	88,451	21,126	17,922	5,289	-	-	-	-	-	-	-	-	-	-	-	3	2,822	300
Newburyport,	-	-	-	-	20,592	5,280	5,280	1,320	3,960	-	-	-	-	-	-	-	-	-	-	26	5,201	8,761
Newton,	-	-	-	-	144,410	96,685	17,350	1,290	19,050	2,400	-	-	-	-	-	-	-	-	-	7	2,112	2,112
North Adams,	-	-	-	-	15,840	11,880	5,280	-	640	-	-	-	-	-	-	-	-	-	-	56	2,415	6,265
Northampton,	-	-	-	-	10,560	23,760	1,000	1,400	-	-	-	-	-	-	-	-	-	-	-	9	1,960	1,300
North Attleborough,	52	2,640	-	-	6,920	25,000	6,000	2,500	-	-	-	-	-	-	-	-	-	-	-	8	2,400	-
Norwood,	-	-	-	-	5,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	3,343	2,783
Pittsfield,	-	2,000	-	-	25,000	5,800	4,750	500	-	-	-	-	-	-	-	-	-	-	-	7	2,190	-
Plymouth,	-	-	-	-	2,663	2,500	3,510	2,000	-	-	-	-	-	-	-	-	-	-	-	2	5,103	-
Roxbury,	-	-	-	-	228,331	35,667	58,169	3,745	-	-	-	-	-	-	-	-	-	-	-	66	1,054	1,507
Salem,	-	-	-	-	38,236	32,949	24,445	919	5,214	22,213	-	-	-	-	-	-	-	-	-	24	4,418	1,132
South Boston,	-	-	-	-	16,052	8,661	25,031	6,800	803	5,788	-	-	-	-	-	-	-	-	-	26	3,042	4,162
Spencer,	2,547	-	-	-	17,704	5,015	5,015	-	-	499	-	-	-	-	-	-	-	-	-	9	2,976	-
Springfield,	-	-	-	-	74,611	61,948	26,532	2,130	5,507	2,600	-	-	-	-	-	-	-	-	-	35	2,216	7,254
Taunton,	-	-	-	-	45,400	6,400	22,100	7,200	600	800	-	-	-	-	-	-	-	-	-	15	3,000	9,700
Waltham,	-	-	-	-	39,213	17,574	12,679	1,500	1,460	-	-	-	-	-	-	-	-	-	-	15	3,000	9,700
Westfield,	-	-	-	-	5,713	5,102	2,575	2,073	-	-	-	-	-	-	-	-	-	-	-	14	2,383	4,639
Woburn,	-	-	-	-	11,801	3,300	2,325	1,480	-	-	-	-	-	-	-	-	-	-	-	5	475	300
Worcester,	9,216	3,562	-	-	71,475	36,428	43,383	6,420	536	-	-	-	-	-	-	-	-	-	-	4	3,270	-
Chicopee Falls,	-	1,600	-	-	1,815	2,500	1,500	-	-	3,881	-	-	-	-	-	-	-	-	-	35	3,645	4,045
Holyoke,	-	-	-	-	40,457	10,053	11,650	5,150	-	-	-	-	-	-	-	-	-	-	-	1	320	-
Lee,	-	-	-	-	1,000	4,000	-	-	-	375	-	-	-	-	-	-	-	-	-	15	315	3,395
Middleborough,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1,720	-
Ware,	2,551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worcester,	-	125	-	-	7,920	-	2,006	-	-	-	-	-	-	-	-	-	-	-	-	2	343	841
Worcester,	-	-	-	-	-	-	5,280	-	-	-	-	-	-	-	-	-	-	-	-	2	2,640	-
Total,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,193	3,008	-

\* Approximate.

<sup>1</sup> Includes 17,158 feet of 30-inch main.<sup>2</sup> Includes 1,575 feet of 20-inch main.<sup>3</sup> Includes 1,485 feet of 20-inch main.<sup>4</sup> Not returned.<sup>5</sup> Includes 2,800 feet of 5-inch main.

## METERS.

All of the companies, excepting Middleborough, made returns of the whole number of meters in use the present year; and the last report contains those of the previous year, excepting Lee. There has been an increase of 5,608 meters and 22,332 lights, as represented by the nominal capacity of the meters.

The following table shows the number of meters in use June 30, and the increase during the year.

Boldface figures show decrease.

NAME OF COMPANY.	NUMBER AND SIZE OF METERS.																							Total Number in use June 30, 1887.	Increase during the Year.
	0	1	2	3	5	10	20	30	35	40	45	50	60	80	100	125	150	180	200	250	300	400	500		
	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.	L't.		
Adams, . . . . .	-	-	5	118	12	3	3	-	-	-	-	-	1	1	3	-	-	-	-	1	1	1	-	-	
Amesbury, . . . . .	-	-	54	15	4	4	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Amherst, . . . . .	-	-	105	105	-	-	50	18	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arlington, . . . . .	-	-	1	164	100	50	18	15	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Attleborough, . . . . .	-	-	67	73	31	18	15	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beverly, . . . . .	-	-	11	289	22	16	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Boston, . . . . .	3	5	398	9,670	6,055	6,533	2,366	1,078	-	-	-	-	-	84	140	1	53	70	8	18	-	-	-	-	
Brookton, . . . . .	-	-	35	384	133	57	15	6	-	-	-	-	-	10	2	4	-	-	-	-	-	-	-	-	
Brookline, . . . . .	-	-	9	481	465	256	96	10	-	-	-	-	-	5	12	19	7	-	-	-	-	-	-	-	
Cambridge, . . . . .	-	-	94	2,876	1,221	2,922	97	43	-	-	-	-	7	3	2	7	1	-	-	1	-	-	-	-	
Charlestown, . . . . .	-	-	117	2,472	549	345	31	31	-	-	-	-	2	11	4	8	3	-	-	2	1	-	-	-	
Chelsea, . . . . .	-	-	60	1,075	165	44	19	6	-	-	-	-	2	2	-	8	1	-	-	1	1	-	-	-	
Chicopee, . . . . .	-	-	-	105	10	8	3	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
Citizens' (Lynn), . . . . .	-	-	-	-	12	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Citizens' (Quincy), . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Citizens' (Wakefield), . . . . .	-	-	104	108	45	26	15	7	-	-	-	-	1	2	2	-	-	-	-	1	1	-	-	-	
Clinton, . . . . .	-	-	24	69	44	26	13	3	-	-	-	-	-	2	2	1	3	-	-	7	1	-	-	-	
Cottage City, . . . . .	-	-	-	65	15	5	5	3	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
Danvers, . . . . .	-	-	1	43	25	9	3	3	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
Dedham, . . . . .	-	-	2	195	36	18	10	1	-	-	-	-	4	5	1	-	1	-	-	-	-	-	-	-	
Dorchester, . . . . .	-	-	34	840	800	128	48	11	-	-	-	-	-	1	1	1	2	-	-	-	-	-	-	-	
East Boston, . . . . .	-	-	632	443	80	30	18	8	-	-	-	-	2	10	2	2	2	-	-	1	-	-	-	-	
Easthampton, . . . . .	-	-	5	114	22	13	8	5	-	-	-	-	2	2	6	3	-	-	-	4	13	11	-	-	
Fall River, . . . . .	-	-	1	488	326	110	36	8	-	-	-	-	1	9	1	5	4	1	1	13	-	-	-	-	
Fitchburg, . . . . .	-	-	-	218	212	31	24	6	-	-	-	-	8	1	6	3	-	1	1	-	-	-	-	-	
Gloucester, . . . . .	-	-	-	480	32	4	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Great Barrington, . . . . .	-	-	-	40	18	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Greenfield, . . . . .	-	-	30	174	17	17	2	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
Haverhill, . . . . .	-	-	118	1,129	120	67	57	20	-	-	-	-	5	9	-	-	-	1	-	-	-	-	-	-	
Ipswich, . . . . .	-	-	3	22	20	25	5	4	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	-	
Jamaica Plain, . . . . .	-	-	17	368	335	193	20	4	-	-	-	-	8	-	2	-	-	-	-	-	-	-	-	-	
Lawrence, . . . . .	-	-	575	970	178	60	31	36	-	-	-	-	16	5	15	22	7	-	2	-	-	-	-	-	
Leominster, . . . . .	-	-	2	159	21	5	8	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lexington, . . . . .	-	-	-	76	1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lowell, . . . . .	-	-	1,033	3,734	735	303	127	95	-	-	-	-	146	2	30	75	-	-	-	-	-	-	-	-	
Lynn, . . . . .	-	-	5	1,380	196	95	47	15	-	-	-	-	15	1	1	14	33	-	9	1	-	-	-	-	

1 Return of previous year incorrect.

NAME OF COMPANY.			NUMBER AND SIZE OF METERS.																				Total Number in use June 30, 1887.		Increase during Year.						
0	1	2	3	5	10	20	30	35	40	45	50	60	80	100	125	150	180	200	250	300	400	500	Lt.	Lt.		Lt.	Lt.	Lt.	Lt.	Lt.	Lt.
Malden, . . . . .	-	-	711	407	70	28	8	-	-	-	-	13	-	4	-	-	-	1	1	1	-	-	1	1,280	137						
Manufacturers (Fall River), . . . . .	-	-	135	26	9	8	2	-	-	-	-	-	-	2	4	-	-	2	4	3	-	-	3	187	10						
Marblehead, . . . . .	-	2	144	29	8	2	2	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	202	121	1						
Marlborough, . . . . .	-	-	3	91	18	16	18	4	-	-	-	5	-	1	-	-	-	-	-	-	-	-	156	1							
Milford, . . . . .	-	34	300	21	21	14	21	-	-	3	-	2	-	7	-	-	-	-	-	-	-	-	402	7							
Miller's River (Athol), . . . . .	-	-	63	30	20	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118	-	3						
Mumal (Southbridge), . . . . .	-	16	67	39	19	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	3							
Nantucket, . . . . .	-	-	184	12	3	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	176	21	1						
Natick, . . . . .	-	2	102	39	23	10	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	187	8							
New Bedford, . . . . .	-	24	1,432	480	124	16	11	-	-	-	-	4	-	1	-	-	-	1	-	-	3	-	2,105	142	8						
Newburyport, . . . . .	-	30	308	36	17	11	1	-	-	-	-	2	-	3	-	1	-	-	-	-	-	-	410	1							
Newton, . . . . .	-	61	849	541	167	60	17	-	-	-	-	8	-	1	3	2	-	-	-	1	-	-	1,701	103	8						
North Adams, . . . . .	-	-	315	42	12	4	2	-	-	-	11	1	3	1	3	3	1	-	2	-	-	-	400	32	10						
Northampton, . . . . .	-	-	273	66	4	5	8	-	-	-	-	5	-	-	-	2	-	-	-	-	-	-	336	1							
North Attleborough, . . . . .	-	-	187	64	43	11	19	-	-	-	-	4	-	2	-	2	-	-	-	-	-	-	330	10							
Norwood, . . . . .	-	-	14	7	6	2	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	37	8							
Pittsfield, . . . . .	-	-	523	54	23	13	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	615	44	8						
Plymouth, . . . . .	-	46	130	12	6	6	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	208	8							
Roxbury, . . . . .	-	93	2,890	1,881	730	96	22	-	-	-	-	20	-	9	-	4	-	8	-	-	-	-	5,750	364	60						
Salem, . . . . .	-	10	1,082	393	95	42	21	-	-	-	-	13	-	3	3	-	-	60	-	-	-	-	2,264	152	2						
South Boston, . . . . .	-	134	1,455	305	59	33	24	-	-	-	-	18	-	1	1	7	-	1	-	-	-	-	2,039	152	2						
Spencer, . . . . .	-	-	197	22	2	4	4	-	-	-	1	4	-	-	-	-	-	236	-	-	-	-	276	159	118						
Springfield, . . . . .	-	2	1,972	463	158	76	3	-	-	-	38	-	6	4	-	33	-	2,783	-	-	-	-	1,624	118	12						
Taunton, . . . . .	-	58	577	219	77	29	26	-	-	-	1	16	-	1	4	9	-	1,024	-	-	-	-	717	60	12						
Waltham, . . . . .	-	224	406	31	10	12	3	-	-	-	-	6	-	-	-	10	-	279	-	-	-	-	279	12	12						
Westfield, . . . . .	-	16	205	33	8	9	2	-	-	-	4	-	-	1	-	-	-	360	-	-	-	-	360	10	10						
Worcester, . . . . .	-	61	207	61	10	7	4	-	-	-	-	2	1	7	11	-	-	3,483	-	-	-	-	211	1	1						
Worcester, . . . . .	-	919	1,899	359	152	71	18	-	-	-	2	38	3	7	-	-	-	2	2	-	-	-	02	79	1						
Chicopee Falls, . . . . .	-	31	11	12	6	1	-	-	-	-	-	-	-	-	1	-	-	5	1	4	1	-	1,099	79	1						
Holyoke, . . . . .	-	6	906	64	42	29	18	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	
Lee, . . . . .	-	25	25	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Middleborough, . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ware, . . . . .	-	-	6	40	30	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101	6	1						
Webster, . . . . .	-	-	95	19	6	2	3	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	131	-	-	-	-	-	-	-	
Totals, . . . . .	3	5	5,277	47,267	17,904	10,775	3,803	1,645	1	7	130	859	149	208	453	1	138	1	121	35	51	1	4	89,087	-	-	-	-	-	-	-

Total 658,950 lights.      1 Return of previous year incorrect.

## HIGH-POWER GAS LAMPS.

The following table shows the number of Lungren or other high-power gas lamps in use June 30, 1887 : —

Adams, . . . . .	32	Manufacturers' (Fall River), . . . . .	2
Attleborough, . . . . .	11	Marblehead (albo-carbon), . . . . .	35
Beverly, . . . . .	10	Marlborough, . . . . .	7
Boston (not known), . . . . .	—	Milford, . . . . .	66
Cambridge, . . . . .	100	Miller's River (Athol), . . . . .	6
Chelsea, . . . . .	25	Natick, . . . . .	20
Chicopee, . . . . .	2	New Bedford, . . . . .	20
Citizens' (Quincy), . . . . .	2	Newburyport, . . . . .	1
Clinton, . . . . .	4	Newton, . . . . .	62
Danvers, . . . . .	2	North Adams, . . . . .	81
Dedham, . . . . .	1	Northampton, . . . . .	13
Dorchester, . . . . .	6	North Attleborough, . . . . .	31
East Boston, . . . . .	95	Pittsfield, . . . . .	7
Fall River, . . . . .	32	Plymouth, . . . . .	31
Fitchburg, . . . . .	7	Roxbury (not known), . . . . .	—
Gloucester, . . . . .	8	Salem, . . . . .	5
Haverhill, . . . . .	2	South Boston, . . . . .	5
Holyoke, . . . . .	1	Springfield, . . . . .	12
Jamaica Plain, . . . . .	2	Taunton, . . . . .	26
Lawrence, . . . . .	179	Waltham, . . . . .	18
Lowell, . . . . .	2	Westfield, . . . . .	8
Lynn, . . . . .	3	Woburn, . . . . .	10
Malden, . . . . .	110	Worcester, . . . . .	12

## GAS STOVES.

But very little definite information is given by many of the companies in answer to the question about gas stoves. A few companies have evidently paid some attention to this branch of the gas business, and apparently with encouraging results. Gloucester has 110 gas stoves, Lawrence 225, Lowell 442, New Bedford 480, Springfield about 900, Taunton 102 and Waltham 119. Most of these companies lease stoves.

## PUBLIC LAMPS.

Compared with the returns for the year ending June 30, 1886, these returns show a net decrease in the number of public lamps supplied by the coal-gas companies of 1,091, and of those supplied by the oil-gas companies of 2. This large loss is due to the growing use of the electric light for street-lighting.

The following table shows the number of lamps supplied, the increase or decrease during the year, the average price per thousand feet received from gas used in street lamps, and also the cost per thousand of the care of the lamps when this is done by the companies.

*Public Lamps — Coal-Gas.*

NAME OF COMPANY.	No. of Lamps Supplied.	INCREASE OR DECREASE IN NO. DURING YEAR.		Average price received per M.	Expense of Lighting and care of Lamps per M.
		In-crease.	De-crease.		
Adams, . . . . .	63	—	—	\$2.5200	—
Arlington, . . . . .	147	—	—	3.0000	—
Attleborough, . . . . .	—	—	—	—	—
Beverly, . . . . .	53	—	19	2.4000	—
Boston, . . . . .	3,460	—	40	1.3840	—
Brockton, . . . . .	48	—	12	2.0000	\$0.7722
Brookline, . . . . .	759	—	29	2.1609	.2725
Cambridge, . . . . .	945	20	—	1.5165	—
Charlestown, . . . . .	1,009	—	48	1.6941	.0073
Chelsea, . . . . .	513	23	—	2.0000	—
Chicopee, . . . . .	75	2	—	2.9990	—
Citizens' (Quincy), . . . . .	123	23	—	2	—
Citizens' (Wakefield), . . . . .	85	2	—	3.3659	—
Clinton, . . . . .	6	—	68	2.3303	—
Cottage City, . . . . .	15	1	—	2	—
Danvers, . . . . .	—	—	—	—	—
Dedham, . . . . .	105	—	86	4.1932	1.3840
Dorchester, . . . . .	1,208	58	—	2.0000	—
East Boston, . . . . .	701	—	87	1.8047	—
Easthampton, . . . . .	56	4	—	2.4525	—
Fall River, . . . . .	320	20	—	1.6763	—
Fitchburg, . . . . .	67	1	—	1.6640	—
Gloucester, . . . . .	97	—	12	2.0000	—
Greenfield, . . . . .	6	—	47	2.5000	—
Haverhill, . . . . .	319	4	—	1.5702	—
Jamaica Plain, . . . . .	569	9	—	2.0000	—
Lawrence, . . . . .	—	—	—	—	—
Lowell, . . . . .	758	—	97	1.2788	—
Lynn, . . . . .	290	—	5	1.8325	.0130
Malden, . . . . .	392	—	33	2.1161	.2690
Manufacturers' (Fall River), . . . . .	94	3	—	1.7428	—
Marblehead, . . . . .	67	6	—	2.5000	1.0320
Marlborough, . . . . .	13	—	29	3.2962	—
Milford, . . . . .	61	—	2	2.0000	.5727
Miller's River (Athol), . . . . .	48	6	—	2.3782	.4794
Nantucket, . . . . .	72	1	—	2.2863	.3491
Natick, . . . . .	17	2	—	2.8342	—
New Bedford, . . . . .	440	—	—	1.6407	.3918

<sup>1</sup> Commenced operations during year.

<sup>2</sup> Amount received from public lamps not given separately.



NAME OF COMPANY.	No. of Lamps Supplied.	INCREASE OR DECREASE IN NO. DURING YEAR.		Average price received per M.	Expense of Lighting and care of Lamps per M.
		Increase.	Decrease.		
Newburyport, . . . . .	150	—	—	\$1.4430	—
Newton, . . . . .	812	—	133	2.5356	\$0.8855
North Adams, . . . . .	100	15	—	1.3028	.3257
Northampton, . . . . .	—	—	87	—	—
North Attleborough, . . . . .	—	—	80	—	—
Norwood, . . . . .	—	—	—	—	—
Pittsfield, . . . . .	70	—	10	1.9023	.5070
Plymouth, . . . . .	41	—	9	2.4058	.8227
Roxbury, . . . . .	1,846	1	—	1.6330	—
Salem, . . . . .	107	—	377	1.8000	.0043
South Boston, . . . . .	806	26	—	1.8320	—
Spencer, . . . . .	—	—	—	—	—
Springfield, . . . . .	486	31	—	1.8000	—
Taunton, . . . . .	162	7	—	1.6238	—
Waltham, . . . . .	180	—	46	—	—
Westfield, . . . . .	34	—	28	2.2500	—
Woburn, . . . . .	81	2	—	2.6933	.6697
Worcester, . . . . .	644	—	56	1.8000	—
Holyoke, . . . . .	83	<sup>2</sup>	—	2.5000	—
Ware, . . . . .	68	3	—	2.7500	—
Webster, . . . . .	40	9	—	3.8517	.9245
	18,711	—	—	—	—
<i>Oil-Gas.</i>					
Amesbury, . . . . .	—	—	1	\$3.2500	—
Amherst, . . . . .	25	—	—	6.0000	—
Great Barrington, . . . . .	—	—	—	—	—
Ipswich, . . . . .	—	—	—	—	—
Leominster, . . . . .	108	2	—	5.0000	—
Lexington, . . . . .	85	—	—	4.0800	\$0.0075
Mutual (Southbridge), . . . . .	43	—	—	3.0000	—
Chicopee Falls, . . . . .	18	—	—	—	—
Lee, . . . . .	<sup>1</sup>	—	—	—	—
Middleborough, . . . . .	—	—	3	—	—
	279	—	—	—	—

<sup>1</sup> No return made.<sup>2</sup> No return made last year.

## PURITY OF GAS.

The law provides that when the gas of any company is found on three consecutive inspections to give less light than fifteen standard English candles, or to contain more than twenty grains of sulphur or ten grains of ammonia per hundred cubic feet of gas, or more than ten per cent of carbonic oxide or any sulphuretted hydrogen, a fine of one hundred dollars shall be paid by such company to the city or town supplied by it. (Pub. Stats., chap. 61, sect. 14.)

The following tables show the amount of impurities found on the given dates, and the whole number of inspections during the year, of the gas of the several companies therein named, as reported to this Board by the State Inspector of Gas.

Kind of Impurities.	NAME OF COMPANY.	Amount of Impurity.	DATE WHEN FOUND.	Total Number of Inspections during the year.
Deficient candle-power.	Spencer, . . . . .	12.5	Dec. 16,	2
Sulphur, grains per 100 cu. ft.	Cambridge, . . . . .	22.2	Mar. 24,	20
	Lawrence, . . . . .	20.3	Mar. 17,	14
	Lowell, . . . . .	23.0	Mar. 17,	30
	Newton . . . . .	25.2	Oct. 13,	8
Ammonia, grains per 100 cubic feet.	Boston, . . . . .	10.5	May 4,	53
	" . . . . .	10.9	June 23,	—
	" . . . . .	12.0	June 29,	—
	" . . . . .	12.1	July 12,	—
	East Boston, . . . . .	13.5	June 14,	8
	Fall River, . . . . .	16.3	Oct. 27,	9
	Holyoke, . . . . .	23.0	June 21,	10
	" . . . . .	11.8	July 6,	—
	Nantucket, . . . . .	18.2	Aug. 18,	2
	" . . . . .	14.3	Oct. 25,	—
	Plymouth, . . . . .	32.3	April 27,	2
	Roxbury, . . . . .	12.5	Aug. 24,	25
	" . . . . .	21.1	Dec. 15,	—
	South Boston, . . . . .	11.1	Oct. 20,	12
	Worcester, . . . . .	12.7	May 12,	17
	" . . . . .	43.4	June 22,	—
	" . . . . .	30.0	July 6,	—
	" . . . . .	12.9	July 28,	—
Sulphuretted hydrogen.	Beverly, . . . . .	Trace.	Nov. 18,	3
	" . . . . .	"	Dec. 24,	—
	Dedham, . . . . .	"	Dec. 3,	3
	Manufacturers' (Fall River), . . . . .	"	Nov. 17,	4
	Plymouth, . . . . .	"	Sept. 30,	2
Carbonic oxide, per cent.	Amesbury, . . . . .	28.66	Nov. 22,	2
	" . . . . .	29.60	Dec. 23,	—
	Cottage City, . . . . .	16.21	Aug. 19,	2
	" . . . . .	15.15	Oct. 26,	—
	Miller's River (Athol), . . . . .	28.40	Aug. 13,	—
	" . . . . .	25.74	Nov. 5,	—
	Roxbury, . . . . .	11.09	Dec. 24,	—

The inspections cited in the above table were consecutive in Holyoke, Nantucket, Worcester, Beverly, Amesbury, Cottage City and Athol, and also the two of June 23d and 29th at Boston.

A comparison of the inspections made in 1885, 1886 and 1887 shows the following results : —

	1885.	1886.	1887.
Number of inspections made, . . . . .	517	426	445
Number of companies subject to inspection, . . . . .	56	58	59
Number of companies showing deficiency in candle-power, . . . . .	-	1	1
Highest candle-power, not including ten oil-gas companies, . . . . .	26.0	24.0	23.3
Lowest candle-power, not including ten oil-gas companies, . . . . .	15.1	14.7	12.5
Average candle-power, not including ten oil-gas companies, . . . . .	17.62	17.76	17.74
Number of companies showing sulphuretted hydrogen, . . . . .	3	4	4
Number of companies showing excess of sulphur, . . . . .	0	2	4
Number of companies showing excess of ammonia, . . . . .	6	15	9
Number of companies showing excess of carbonic oxide, . . . . .	3	4	4
Largest amount of sulphur, . . . . .	19.1	29.2	25.2
Smallest amount of sulphur, . . . . .	2.8	2.5	1.4
Average amount of sulphur, . . . . .	9.93	10.42	8.81
Largest amount of ammonia, . . . . .	36.4	58.7	43.4
Smallest amount of ammonia, . . . . .	1.—	1.—	1.—
Average amount of ammonia, . . . . .	3.21	4.05	3.29

The inspections of the ten oil-gas companies showed : —

	1885.	1886.	1887.
Highest candle-power, . . . . .	61.3	58.6	59.7
Lowest candle-power, . . . . .	20.0	23.0	22.1
Average candle-power, . . . . .	30.60	30.35	30.36

#### VIOLATION OF LAWS.

The Board, at the time of its inspection of the works of the Miller's River Gas Light Company, at Athol in October, saw no evidence that a change had been made in the process of manufacturing gas, as was promised by the treasurer of the company in his letter to the Board, under date of Dec. 29th, 1886. It is

understood that proceedings have been commenced against the company to enforce the penalty for the violation of law mentioned in the last report.

The Worcester Gas Light Company has incurred and paid the fine prescribed for making gas containing an excess of ammonia.

In pursuance of the statute the Board notified the Attorney-General that it appeared, by information received from the State Inspector, that the gas supplied by the Cottage City Gas Company was found to have an excess of carbonic oxide at three consecutive inspections, as follows : —

July 7, 1886, . . . . .	17.50 per cent.
Nov. 30, 1886, . . . . .	23.80 per cent.
Aug. 19, 1887, . . . . .	16.21 per cent.

The Board has recently been informed that the fine has been paid by the company.

#### PETITION OF GAS CONSUMERS IN WORCESTER.

The following petition was received by the Board, January 4, 1887 : —

#### COMMONWEALTH OF MASSACHUSETTS.

*To the Honorable the Gas Commissioners of the Commonwealth :*

The undersigned, being citizens of Worcester in the county of Worcester, and customers of the Worcester Gas Light Company, and twenty at least in number, complain against said company, and allege that for a long time past the said company has sold and delivered to your complainants and others gas of a greatly inferior quality, of insufficient illuminating power, and composed of such materials as to cause great and unnecessary quantities of smoke in burning, and in other respects below the reasonable standard of excellence with which it ought to comply. And your complainants further allege that said company has charged, and continues to charge, a price for its gas so sold and delivered much higher than it is worth, and more than said company ought to charge, having reference to the cost thereof, and much more than it has a right to charge under the provisions of its charter and according to the obligations under which it was allowed to establish its business in said Worcester.

Dated this 31st day of December, 1886.

The hearing on this petition was begun on February 12, and by request of the parties interested was continued upon the 19th and 26th of February, the 5th, 12th and 19th of March. Twenty-six

witnesses were called for the petitioners and ten for the company. All the evidence was heard in Worcester, but the closing arguments were made at the office of the Board in Boston.

The report follows : —

COMMONWEALTH OF MASSACHUSETTS.

OFFICE OF THE BOARD OF GAS COMMISSIONERS,  
13 BEACON STREET, BOSTON.

REPORT UPON THE PETITION OF SUNDRY CUSTOMERS OF THE WOR-  
CESTER GAS LIGHT COMPANY.

This was a complaint in writing against the Worcester Gas Light Company concerning the quality and price of gas, and was signed by 105 consumers. The hearing was begun on February 12 and finished on the 19th day of March. Both parties were represented by able counsel, and numerous witnesses were examined on behalf of each.

Aside from some suggestions about smokiness, the principal complaint was of the great variation in the quality of the light, and this difficulty was shown to exist in localities widely separated. There was a concurrence of testimony that at times in certain localities the light was quite satisfactory and that at other times it was very greatly diminished. There was also some criticism of the general policy of the company under which this condition of things had arisen. The witnesses were for the most part business men without knowledge of gas making, and confined their evidence to their personal observations with but little attempt to reveal causes or suggest remedies. From the evidence it appeared that these difficulties were not seriously felt until some time in the winter of 1884-85, and had continued since that time, being least noticeable in the months of least consumption.

The company did not attempt to deny that some of these difficulties existed, but claimed that, with the possible exception that in certain streets their mains might have become too small for the increased consumption, the difficulties were due to causes wholly beyond their control and particularly to serious defects in the piping and fixtures on the premises of the consumer.

Besides considering the evidence presented at the public hearing it was found necessary to make a careful examination of the company's entire facilities for manufacture and distribution, to study the method employed in making the gas as shown by its manufacturing records, which appear to have been carefully kept, and to make a rigid scrutiny of its books of account and such of its corporate records as indicated the general policy and history of its corporate affairs.

The Board is convinced that the manufacture of gas is under the charge of an efficient and competent gas engineer of long experience, and there is but little criticism to be made of his methods, excepting such as would probably apply to any works where water-gas is made in

varying quantities and at unequal intervals of time and delivered with coal-gas.

In forty-three inspections made by the State inspector of gas since Jan. 1, 1885, the candle-power has never been found below the legal standard, in only two instances was the legal limit of impurities attained, and during this time the average candle-power would compare favorably with that of other large companies in the State. All these inspections were made at the company's office. Although these facts are to the credit of the company they cannot be considered a sufficient answer to the complaints in this case, since the difficulties are of a character which it is not a part of the inspector's duty to investigate.

It ought not to be overlooked in the determination of a case of this kind that, even where the greatest care is taken in the management, accidents may occur at the works, and the flow of gas in the pipes may be more or less interrupted by temporary and unexpected obstructions, equally annoying to manager and consumer. Chief, perhaps, among these is naphthaline, whose properties are as yet but imperfectly understood by gas engineers. It is possible that some portion of the difficulties experienced at Worcester is due to the occasional formation of this substance in the mains, and although it was suggested that it had occurred with greater frequency during the present winter than formerly, the Board is unable to say, from any evidence in its possession, that this fact is due in any degree to the appliances or materials used, or the methods of manufacture employed, or that the company is in any way responsible for the presence of this and kindred obstructions. But if prevention is impossible, the cure should be complete and promptly applied. A sufficient number of competent men should be ready at all proper times to attend to complaints of this character, and to remedy the difficulties as speedily as the circumstances will permit. To such service consumers are properly entitled, and when efficiently performed it is to the great advantage of both company and consumer. From an inspection of a large book containing memoranda of various matters there is some evidence that these complaints have not always received attention with the promptness their nature seems to demand. This work would probably be aided by keeping a book exclusively for recording complaints, which should show the name of the consumer, the trouble alleged, the time when the complaint was received and attended to, what trouble was found, and how and when it was removed, with any other facts deemed important.

The importance of proper piping and the best fixtures can hardly be overestimated, but it too often happens that these receive no attention, and the unfortunate consumer charges to "poor gas" a condition of things which by reasonable care he might have easily escaped. It is undoubtedly the duty of the company to use all reasonable means to inform the public of the conditions which ought to be observed in such work, and to inspect the same when finished and point out needed changes. More than this it cannot be expected to do; the responsibility must then be with the owner or tenant.

The suggestion that the cause of the difficulties in Worcester was to

be found in the faulty piping upon the premises of many consumers has led to a personal inspection on behalf of the Board of the piping and fixtures in several buildings where complaints were made. In some instances the poor light may have partially resulted from defective piping and was therefore not wholly the fault of the gas company. But an examination of the system of street mains and the records of the company show very clearly that its policy has been narrow and illiberal in the management of its business. Many of the mains are manifestly too small for the amount of gas required to pass through them. Apparently but little effort has been made to extend the mains to secure an increased sale of gas or to increase the size of those already laid, to keep pace with increased consumption. The company and the public have both suffered from this want of enterprise in pushing the business.

The cause of the complaint in regard to the poor quality of the light is believed to be due, principally, to the small size of many of the mains, and the manner in which they have been laid. A prominent instance of this is the northerly portion of Union Street, where, to supply a continuous line of large manufacturing establishments, reliance is placed exclusively on a three-inch main, with no connections to assist the circulation. This should be replaced by at least a six-inch main, with such connections as will best facilitate a flow of gas. On the western side of the city the pipes are carried over a ridge 125 feet above the gas works, and are used to supply levels 60 to 75 feet below on the opposite side. Such methods of delivering gas require a higher pressure than is desirable either to the company or the consumer. Some portion of this excessive pressure may be overcome by so connecting the mains as to improve the circulation.

In the judgment of the Board a line of leading mains of ample size should be constructed, extending in parallel lines on either side of this ridge and around its northerly end. These parallel lines should be connected by mains already built over the ridge and others, which the increased consumption will probably soon render necessary. To do this would call for so large an expenditure of money that its immediate completion is not urged. In the judgment of the Board the demand for this is imperative, and arrangements for its execution ought to be entered upon as soon as practicable. The mains then on both sides of the ridge would be at about the same level, and the gas would be supplied to the higher levels with a very much less pressure than is now required.

As already stated, the size and system of laying the mains is responsible, in a very large degree, for the insufficiency of light. There are, however, two other facts that may have contributed, in some instances, to aggravate the trouble. These are the large amount of nitrogen found in the gas, and the use of water and coal-gas combined.

From the testimony of the State inspector of gas it appears that more than a normal amount of nitrogen has frequently been found in the Worcester gas. On two occasions, when from 15 to 25 per cent. of this element appeared, it was claimed by the company to be due to an

accident. No attempt was made to account for the large amount found on other occasions.

It appeared also from the testimony of the inspector that a quantity of nitrogen, which would have but very little effect on the illuminating power of the gas when burnt in an argand burner, such as is used by the inspector, might reduce the candle-power by nearly 50 per cent. when the gas was consumed in the flat-flame burner commonly used.

Since some time in January, 1885, the gas supplied by the company has been partly coal-gas and partly water-gas, the former made in benches, with regenerative furnaces of an approved pattern, the latter in a double set of the "Granger" apparatus. Both these plants have been needed to supply the demand during the periods of greatest consumption.

Opinions of gas engineers differ widely as to the feasibility of manufacturing and distributing these two gases together, and the Board does not feel called upon to pronounce upon the general proposition, but only to consider whether the particular methods employed at Worcester have contributed in any degree to the difficulties existing there. It is to be noted that while the operation of the coal-gas works was regular and constant, that of the water-gas works was irregular and intermittent, governed, apparently, by the season or the weather. Periods of several days occur in which the proportion of water-gas to coal-gas is maintained nearly constant, followed by longer or shorter periods with a much smaller proportion of water-gas. Intervals occur in the same month of from two to five days each in which no water-gas was made. A consideration of these facts makes it probable that from time to time gas varying in density and in illuminating power would be sent out and used by consumers. Although the effects of such a method would probably be visible at the burner in some localities, it was also probable that, under all the circumstances, no other method was practicable.

Not only is there a considerable variation in consumption from day to day, so that while one day it may be far above the average and the next far below, but for many days the average consumption has exceeded by many thousands the utmost capacity of the holders.

Since this hearing was begun the company has undertaken to relieve itself of embarrassment in this direction, and has now in process of erection an additional holder of a capacity sufficient to more than double their present holder room. Included in this plan of improvement is provision for the erection of approved appliances for maintaining a steady and uniform pressure.

At the suggestion of the Board the State inspector on Friday, March 4, between 5 and 10.30 P. M., made certain tests of the gas in four localities with the following results:—

		Elevation above sea level.	Pressure.	Specific Gravity.
No. 1,	. . . . .	472	2.3	.532
No. 2,	. . . . .	479	1.9	.502
No. 3,	. . . . .	563	3.1	.496
No. 4,	. . . . .	606	3.2	.465



The candle-power at No. 2 was 18.2 and at No. 3 18.3. Samples of gas were taken at three points and eudiometric analyses made of each as follows:—

	No. 1.	No. 2.	No. 4.
Illuminants, . . . . .	6.65	5.55	4.76
Marsh gas, . . . . .	38.53	40.65	41.08
Hydrogen, . . . . .	37.11	38.20	41.30
Carbonic oxide, . . . . .	10.49	8.73	6.83
Nitrogen, . . . . .	6.38	6.10	5.25
Oxygen, . . . . .	.14	.10	.11
Carbonic acid, . . . . .	.70	.67	.67
	<hr/> 100.00	<hr/> 100.00	<hr/> 100.00

The complaint about smokiness is so vague and so little explained that the cause and its remedy are not easy to define. The same elements which give the gas a high candle-power may produce smoking if consumed under unfavorable conditions of fixtures or burners, or with insufficient pressure, whether due to small mains, defective piping or other cause.

The petitioners made but little attempt to show by testimony that the price of gas is too high. It was urged by the counsel for the petitioners that there is a binding obligation between the gas company and the citizens of Worcester which requires that gas shall be furnished at as low a price as it is sold in the cities of Boston, New York or Baltimore. This contract seems never to have been enforced, although it is as old as the company, and the Board is not fully convinced that this is the proper tribunal to compel the gas company to fulfill this contract or to determine its validity.

Notwithstanding the want of evidence, the Board believes that the complaint of the petitioners in regard to price should be carefully considered, and is of the opinion that the company should be required to sell gas at a less price than it is now charging to consumers.

A reduction in price should be made, because the capital of the company is excessive for the output of gas and the value of its plant. It should be stated, however, that every dollar of stock has been paid in cash. The company has not improved its field for business to the extent it might have done.

It appears the ambition of the directors has been to pay a yearly dividend of ten per cent. on the capital stock, and this they have succeeded in doing nearly the entire period of thirty-five years that the company has been in existence, notwithstanding the fact that the company has had more than the average number of accidents and misfortunes incident to the business.

Worcester ought to consume two or three times the amount of gas that is now sold, and under a different policy would undoubtedly do so, and this increased consumption would easily insure lower prices. The company has a valuable franchise and is under obligations to make every reasonable effort to supply the citizens with all the gas required, and at a price consistent with a fair interest on the investment.

The company may be held responsible, in some degree, for what it has failed to do in extending its business. Worcester is the second city

in size, wealth and importance in the State, and yet there are twelve towns and cities where the price of gas is less.

It has been the experience of most companies that a decrease in price of gas reduces the income but little, and that only temporarily. The increased consumption soon renders the profits larger than before the reduction.

We believe that a reduction in price is not only of advantage to the consumer, but also to the company. The Board recommends that on and after July 1, 1887, the net price charged by the Worcester Gas Light Company be not more than one dollar and fifty cents per thousand feet.

A change was made in the chairmanship of this Board subsequent to the hearing but before the conclusions were fully reached on this petition. The former chairman has, however, read the report and concurs in the recommendations. The present chairman not having heard any of the evidence or arguments has deemed it improper to take any action in the case.

For the Board,

EDWARD T. ROWELL.  
FORREST E. BARKER.

May 14, 1887.

This report was delivered to the company on the sixteenth day of May, and on the following day was considered at a full meeting of the board of directors, when it was voted "that on and after July 1, 1887, the price of gas shall be \$1.80 per thousand feet, with a discount of 30 cents per thousand feet on all bills paid on or before the 15th day of the month in which they are presented." Prior to this the officers of the company had appreciated the necessities of the situation and had inaugurated an extensive scheme of improvements which they have pursued with steadiness and vigor under peculiar and serious embarrassments. Before the plans for these were fully matured the superintendent was attacked by a serious and painful illness which rendered it impossible for him to give to the details of the work that constant attention which was his custom. The company had not employed an assistant superintendent and had no man who could be spared from other duties or was thought able to undertake this work, nor was it able to find one until midsummer, when a competent man, in the employ of the Boston company, was secured and the office of assistant superintendent was created.

A new double-lift covered holder has been erected at the works, upon land purchased during the year, with a capacity of 400,000

cubic feet, increasing the storage facilities fully 100 per cent. The contractors were unable to complete this holder until after the days of largest consumption had passed, and for a time some of the embarrassments and disadvantages of a year ago were manifest. The small holder at Lincoln Square has been rebuilt of heavier material and may now be relied upon to work to its full capacity.

More than 16,000 feet of new mains have been laid and none less than three inches in diameter. Much of this has been used to replace smaller mains to improve the circulation by connecting the "dead ends" and in some cases to parallel old pipes with new and larger ones. In taking up old street mains and relaying larger pipe nearly all the services have been relaid and usually with larger pipe, especially in those streets where manufacturing establishments or large buildings are situated and where complaints had been most frequent.

An automatic governor of approved modern construction is to be placed upon the large main leading from the works, by which ample and uniform pressure may be maintained. New purifier covers have been purchased and a "Standard" scrubber with a capacity for 750,000 feet per day has been delivered at the works and is soon to be set up.

About eighty thousand dollars have already been expended in these improvements and plans are making for extensive alterations and additions the coming season, particularly in the way of main laying.

The Board recognizes and appreciates the readiness with which the company has adopted its suggestions, and this promptness has called out a general and merited expression of satisfaction on the part of the public. The greatly improved relations which now exist between the company and its customers must prove of decided advantage to both parties.

## ELECTRIC LIGHT.

By chapter 382 of the Acts of 1887, which may be found in the Appendix, the Board was given supervision of companies engaged in the manufacture and sale of electric light.

It was obvious that the duties imposed by the statute were important, as well to the public as the companies. Recently great interest has been shown in the subject of utilizing electricity for lighting. It has attracted large amounts of capital and the talent of the most celebrated inventors of the age. Many things have already been accomplished which but a short time ago were deemed impossible even by the best electricians. The members of the Commission have endeavored to inform themselves upon the subject as rapidly as possible, recognizing that the public interest required that no steps should be taken on their part which would tend to thwart further progress, while the electric light companies could rightly demand a proper consideration for their efforts and enterprises. The public in many places evidently desire electric light as well as gas light, and the capital invested in either method of lighting is entitled to equal protection by the action and policy of the Board, to the extent that will aid in securing permanently the best and cheapest light.

At once was begun the work of obtaining the names of the electric light companies and their respective places of business. As several of them were organized outside the State this was not easily done, but by addressing circulars of inquiry to the town clerks and through other sources it is believed that the names of those actively engaged in business and those organized during the year have been ascertained, and that the list herein given is quite complete. Several of the companies have been visited. The officers and agents of the companies have cordially aided the Board in its investigations, cheerfully exhibiting their books, showing their methods of business, explaining the system and apparatus in use by them and its operation.

It may be said here that electric lights may be divided into two great classes, arc and incandescent. In the arc light a current of electricity is caused to jump across a space between two carbon

points, while in the incandescent lamp a carbon thread is heated by the passage of an electric current to bright redness or whiteness.

The arc lamp consists of two carbon rods enclosed in a glass globe open to the air, between whose points a current of electricity passes; this current transfers small particles from one rod to the other, and raises them during the passage to a very high heat, causing them to give off an intense light. This transference of carbon particles shortens the upper rod and lengthens the lower one, but as some of the carbon is burnt in the air during the passage the lower rod does not grow as rapidly as the upper wastes, so by an ingenious arrangement of magnets the current passing through the lamp causes the upper rod to be fed down at such a rate as to maintain the carbon points at a constant distance apart.

The carbon thread of an incandescent lamp is enclosed in a glass globe from which the air has been exhausted, and is connected with the current coming from the outside wires by means of two bits of platinum wire fused into the glass and attached one to either end of the carbon thread within the globe. The removal of the air prevents the burning of the carbon thread when heated by the passage of the current of electricity.

The arc lights, which give an intense bluish white light, are principally used for street lighting and for large and open rooms, whilst the incandescent lamps, yielding a light of about the same character as gas, are used principally for interior lighting.

Blank balance sheets were sent to each of the companies immediately after the passage of the act, with the request that they be filled out so as to show the financial condition of the company as it appeared on the books at the close of business June 30, 1887. These sheets have all been returned, made up in the main in a manner creditable to the companies and satisfactory to the Board.

Under the statute it also became the duty of the Board to prescribe a form of book-keeping for the companies. In doing this it was the wish of the Board to adopt a method which should be as full and complete as practicable, at the same time following substantially the best systems already in use, and imposing the least amount of extra labor. In this respect the Board desires to

acknowledge the valuable assistance it has received from various companies which it visited, whose officers courteously explained the manner in which the books and accounts of the financial part of the business were kept; also the daily and monthly records of the work done.

The rules and regulations prescribed for keeping the books and accounts will be found in the Appendix.

In December a circular for the purpose of obtaining information of a general character was sent to the different companies, containing questions relating to the size of the plant and the kind and quantity of lights and the amount of power supplied. The facts gathered from the answers to this circular have been tabulated and will, it is believed, be of very great interest.

Eight of the companies were incorporated under the laws of Maine and one under the laws of New Hampshire. It is to be regretted that all are not domestic corporations. The position of a foreign company doing a purely local business and receiving a location for its lines from our town or city officials, with the same formality as if it were chartered here, is to say the least anomalous. Any temporary advantage such as the escape of taxation for a time is more than offset by the doubts and uncertainties as to the legal rights and status of the company. There would seem to be no justification in going to another State for a charter to do business of such a nature within the Commonwealth. If our laws bear too heavily upon this class of corporations let the injustice be pointed out and remedied. The organization of foreign companies for this kind of work should not be encouraged.

The following table gives the name, the year of incorporation, the State in which chartered, the localities supplied, and the capital of the various electric light companies doing business in this State:—

NAME OF COMPANY.	When organized.	State in which chartered.	LOCALITIES SUPPLIED.	Capital.
The Beverly Electric Light Co., . . . . .	1887	Not chartered, association,	Beverly, . . . . .	—
Boston Electric Light Co., . . . . .	1886	Maine, . . . . .	Boston, Chelsea, Cambridge, . . . . .	\$800,900
Brookline Gas Light Co., . . . . .	1887 <sup>1</sup>	Massachusetts, . . . . .	Boston (Brighton district), Brookline, . . . . .	—
Cambridge Electric Light Co., . . . . .	1886	Massachusetts, . . . . .	Cambridge, . . . . .	60,000
Charlestown Gas Co., . . . . .	1886 <sup>2</sup>	Massachusetts, . . . . .	Boston (Charlestown), . . . . .	—
Chicopee Electric Light Co., . . . . .	1887	Massachusetts, . . . . .	Chicopee, . . . . .	10,000
Clinton Gas Light Co., . . . . .	1887 <sup>1</sup>	Massachusetts, . . . . .	Clinton, . . . . .	—
Cottage City Gas Co., . . . . .	1885 <sup>2</sup>	Massachusetts, . . . . .	Cottage City, . . . . .	—
Edison Electric Illuminating Co. of Boston, . . . . .	1885	Massachusetts, . . . . .	Boston, . . . . .	500,000
Edison Electric Illuminating Co. of Brockton, . . . . .	1883	Massachusetts, . . . . .	Brockton, . . . . .	71,000
Edison Electric Illuminating Co. of Fall River, . . . . .	1883	Massachusetts, . . . . .	Fall River, . . . . .	81,600
Edison Electric Illuminating Co. of Lawrence, . . . . .	1882	Massachusetts, . . . . .	Lawrence, . . . . .	65,000
Edison Electric Illuminating Co. of New Bedford, . . . . .	1884	Massachusetts, . . . . .	New Bedford, . . . . .	100,000
Electric Light and Patent Flooring Co., . . . . .	1886	Massachusetts, . . . . .	Amesbury, . . . . .	22,000
Essex Electric Light and Power Co., . . . . .	1884	Maine, . . . . .	Haverhill, Groveland, . . . . .	<sup>3</sup>
Fall River Electric Light Co., . . . . .	1883	Massachusetts, . . . . .	Fall River, . . . . .	40,000
Framingham Electric Light Co., . . . . .	1887	Not chartered, owned by an individual, . . . . .	Framingham, . . . . .	—
Franklin Electric Light Co., . . . . .	1887	Not chartered, owned by a firm, . . . . .	Franklin, . . . . .	—
Franklin Electric Light Co., . . . . .	1886	Massachusetts, . . . . .	Turner's Falls, . . . . .	4,900

<sup>1</sup> Date of permission to engage in the business granted by Board.<sup>2</sup> Date of permission to engage in the business given by Legislature.<sup>3</sup> Not returned.

NAME OF COMPANY.	When organized.	State in which chartered.	LOCALITIES SUPPLIED.	Capital.
Gloucester Electric Light Co., . . . . .	1884	Massachusetts, . .	Gloucester, . . . . .	\$12,500
Greenfield Electric Light and Power Co., . . . . .	1886	Massachusetts, . .	Greenfield, Deerfield, . . . . .	10,000
Holyoke Electric Light and Power Co., . . . . .	1884	Massachusetts, . .	Holyoke, South Hadley, . . . . .	30,000
The Hudson Electric Light Co., . . . . .	1886	Maine, . . . . .	Hudson, . . . . .	15,000
Lawrence Gas Co., . . . . .	1887 <sup>1</sup>	Massachusetts, . .	Lawrence, . . . . .	—
Lynn Electric Lighting Co., . . . . .	1882	Massachusetts, . .	Lynn, Swampscott, . . . . .	50,000
Leicester Electric Co., . . . . .	1887	Massachusetts, . .	Leicester, . . . . .	4,000
Malden Electric Light Co., . . . . .	1885	Maine, . . . . .	Malden, Melrose, Medford, . . . . .	30,000
The Marlborough Schuyler Electric Light Co., . . . . .	1886	Massachusetts, . .	Marlborough, . . . . .	30,000
Middlesex Electric Light Co., . . . . .	1883	Maine, . . . . .	Lowell, . . . . .	130,620
Millford Electric Light and Power Co., . . . . .	1886	Massachusetts, . .	Millford, Hopedale, . . . . .	30,000
Millbury Electric Co., . . . . .	1887	Massachusetts, . .	Millbury, . . . . .	10,000
Natick Electric Co., . . . . .	1886	Maine, . . . . .	Natick, . . . . .	30,000 <sup>2</sup>
New Bedford Electric Light Co., . . . . .	1883	Massachusetts, . .	New Bedford, . . . . .	75,000
Newburyport Electric Light and Power Co., . . . . .	1887	Massachusetts, . .	Newburyport, . . . . .	15,000
Newton Electric Light and Power Co., . . . . .	1886	Massachusetts, . .	Newton, Watertown, . . . . .	25,000
North Adams Electric Light and Power Co., . . . . .	1885	Massachusetts, . .	North Adams, . . . . .	7,500
Northampton Electric Lighting Co., . . . . .	1886	Massachusetts, . .	Northampton, . . . . .	40,000
North Attleborough Steam and Electric Co., . . . . .	1886	Massachusetts, . .	North Attleborough, Attleborough, . . . . .	30,000
Palmer Electric Co., . . . . .	1887	Massachusetts, . .	Under construction; will supply Palmer and Monson, . . . . .	30,000
Pittsfield Illuminating Co., . . . . .	1887	Massachusetts, . .	Pittsfield, . . . . .	25,000
Pittsfield Electric Light Co., . . . . .	1885	Massachusetts, . .	Pittsfield, . . . . .	5,000
Plymouth Electric Light Co., . . . . .	1886	New Hampshire, . .	Plymouth, . . . . .	3



Salem Electric Lighting Co., . . .	1882	Massachusetts, . .	Salem, . . .	70,000
The Somerville Electric Light Co., . .	1887	Massachusetts, . .	Somerville, . . .	20,000
Southbridge Electric Co., . . .	1887	Massachusetts, . .	Southbridge, . .	15,000
Spencer Gas Co., . . .	1886	Massachusetts, . .	Spencer, . . .	—
Taunton Electric Lighting Co., . . .	1882	Massachusetts, . .	Taunton, . . .	20,000
United Electric Light Co., . . .	1887	Massachusetts, . .	Springfield, . .	100,000
Wachusett Electric Light Co., . . .	1883	Maine, . . .	Fitchburg, . . .	100,000 <sup>4</sup>
Waltham Gas Light Co., . . .	1886 <sup>5</sup>	Massachusetts, . .	Waltham, . . .	—
Ware Electric Light Co., . . .	1887	Massachusetts, . .	Plant in process of erection, . .	15,000
Webster, . . .	1887	Massachusetts, . .	— . . .	10,000
Westborough Electric Light and Power Co., .	1886	Maine, . . .	Westborough, . . .	3
Westfield Gas Light Co., . . .	1887 <sup>1</sup>	Massachusetts, . .	Westfield, . . .	—
Woburn Electric Light and Power Co., . .	1887	Massachusetts, . .	Woburn, . . .	18,000
Worcester Electric Light Co., . . .	1883	Massachusetts, . .	Worcester, . . .	100,000

<sup>1</sup> Date of permission to engage in the business granted by Board.

<sup>2</sup> June 30, 1887, amount paid in \$14,200.

<sup>3</sup> Not returned.

<sup>4</sup> June 30, 1887, amount paid in \$81,000.

<sup>5</sup> Date of unanimous consent of stockholders allowing company to engage in the business.

The following electric light companies, not included in the above list, were incorporated during the year:—

Somerville Electric Light, Heat and Power Co.,	Feb. 1,	\$25,000
Westfield Electric Light Co.,	Feb. 9,	25,000
Orange Electric Light Co.,	Oct. 7,	10,000
Adams Electric Light and Power Co.,	Dec. 10,	5,000

Of these companies the ones at Adams and Orange are under construction, the one at Somerville has never done anything, and that at Westfield has been absorbed by the gas company.

The following table gives some of the statistics of arc lighting, and the next following gives corresponding figures for incandescent lighting, as done from central stations in this State. This information is of Dec. 15, 1887.

*Arc Lighting.*

NAME OF COMPANY.	SYSTEM USED.	Maximum Dyna- mo Ca- pacity.	Num- ber Public Lights.	Nominal Candle- Power.	Number of Hours burnt per Night.	Number of Nights per Month.	Price per Night.	Num- ber of Com- mercial Lights.	Nomi- nal Candle- Power.	Num- ber of Cus- tomers.
Beverly, . . . . .	Thomson-Houston, .	35	15	2,000	Sunset to midnight, .	Every night, .	\$0.60	- 2	- 2	- 2
Boston, . . . . .	Brush, Thomson-Hous- ton, American.	2,337	550	2,000	8 to 15, . . . . .	Every night, .	0.65	1,355	2,000	317
Brookline, . . . . .	Thomson-Houston, Amer- ican, Weston.	260	95	61 at 1,200 33 at 2,000	Average 10½, . . . .	Every night, .	0.50	36	2,000	22
Cambridge, . . . . .	New England, Weston, .	210	77	2,000	Average 10.85, . . . .	Every night, .	0.55	40	2,000	27
Charlestown, . . . . .	Brush, . . . . .	120	51	2,000	8 to 15, . . . . .	Every night, .	0.65	20	2,000	16
Chillicothe, . . . . .	Thomson-Houston, . .	50	32	1,200	Until 1 A.M., . . . .	25, . . . . .	Abt. 0.26½	-	-	-
Cinton, . . . . .	Schuyler, . . . . .	90	30	1,200	Six to seven, . . . . .	Av. nearly 30, . . . .	Abt. 0.28	30	1,200	16
Cottage City, <sup>1</sup> . . . .	Ball, . . . . .	60	7	1,600	Six, . . . . .	30, . . . . .	0.62½	35	1,600	2
Edison (Brockton), . .	Thomson-Houston, Amer- ican, . . . . .	110	25	2,000	Sunset to 1 A.M., . . .	Every night, .	0.45	61	2,000	38
Edison (Lawrence), . .	American, . . . . .	50	-	-	- - - - -	- - - - -	-	45	2,000	23
Elec. Light & Pat. Floor- ing Co. (Amesbury), . .	Thomson-Houston, . .	80	49	1,200	To 12 o'clock, . . . .	All dark nights, .	3	16	1,200	7
Essex (Haverhill), . .	Thomson-Houston, . .	150	34	2,000	Dusk to dawn, . . . .	Moon schedule, .	0.47	60	1,200	Abt. 40
Fall River, . . . . .	Thomson-Houston, . .	226	27	2,000	All night, . . . . .	Every night, .	Abt. 0.56½	146	1,200	27
Framingham, . . . . .	Thomson-Houston, . .	75	37	1,200	Dark till 12.30 A.M., .	Every night, .	0.33½	3	1,200	8
Franklin, . . . . .	Thomson-Houston, . .	60	25	1,200	Until midnight, . . . .	18 minimum, .	0.32	9	1,200	7
Franklin (Turner's Falls),	Thomson-Houston, . .	30	18	2,000	Until 1 A.M., . . . .	26, . . . . .	Abt. 0.33	9	2,000	7
GloUCESTER, . . . . .	Thomson-Houston, . .	88	15	1,200	Twilight to 12 o'clock, .	Every night, .	Abt. 0.26½	21	1,200	8
Greenfield, . . . . .	Thomson-Houston, . .	45	20	1,200	Dark until 11, . . . .	Except when good moon, . . . . .	4	15	1,200	6
Holyoke, . . . . .	Schuyler, . . . . .	375	92	2,400	21 all night, rest till mid- night, . . . . .	20 to 24, . . . .	All night, 0.50 Others, . . . . .	223	2,000	70
Hudson, . . . . .	Thomson-Houston, . .	45	10	1,200	To 11.30 P.M., . . . .	Every night, .	0.37½	9	1,200	8
Lawrence, . . . . .	Thomson-Houston, . .	150	17	2,000	Till 12 o'clock, . . . .	Every night, .	Abt. 0.25	94	2,000	33
Lynn, . . . . .	Thomson-Houston, . .	270	115	2,000	Sunset to 1 A.M., . . .	Every night, .	0.47½	132	2,000	65

<sup>1</sup> Run during summer months only.<sup>2</sup> Not returned.<sup>3</sup> \$75 per year, equal to about 25 cents per night.<sup>4</sup> Yearly contract.

*Arc Lighting—Concluded.*

NAME OF COMPANY.	SYSTEM USED.	Maximum Dyna- mo Ca- pacity.	Num- ber Public Lights.	Nominal Candle- Power.	Number of Hours burnt per Night.	Number of Nights per month.	Price per Night.	Num- ber of Com- mercial Lights.	Nomi- nal Candle- Power.	Num- ber of Cus- tomers.
Malden, . . . . .	Thomson-Houston, .	80	44	1,200	Dark until midnight, .	Every night, .	Abt. \$0.27½	33	1,200	18
Marlborough, . . . .	Schuyler, . . . . .	70	22	2,000	Sunset to midnight, .	Every night, .	Abt. 0.27½	26	1,200	19
Middlesex (Lowell), .	Thomson-Houston, .	350	104	2,000	Dark to daylight, .	Every night, .	0.55	240	2,000	72
Milford, . . . . .	Thomson-Houston, .	95	15	1,200	Sunset to midnight, .	Every night, .	Abt. 0.33½	69	1,200	17
Millbury, . . . . .	Thomson-Houston, .	50	15	1,200	Until midnight, .	Every night, .	0.22	18	1,200	7
Natick, . . . . .	Thomson-Houston, .	83	27	1,200	Until 12.30 A.M., .	Every night, .	Abt. 0.33½	20	1,200	16
New Bedford, . . . .	Thomson-Houston, .	186	50	2,000	Sunset to half hour be- fore sunrise, .	26 to 31, .	0.50	86	2,000	33
Newburyport, . . . .	Thomson-Houston, .	80	31	1,200	Sunset to midnight, .	20, . . . .	0.33½	28	1,200	15
Newton, . . . . .	Thomson-Houston, .	90	76	1,200	Sunset to sunrise, .	20, . . . .	0.50	—	—	—
North Adams, . . . .	Thomson-Houston, .	83	—	—	—	—	—	53	1,200	22
Northampton, . . . .	Thomson-Houston, .	140	83	1,200	Till midnight, . . .	25, . . . .	Abt. 0.25	30	1,200	15
North Attleborough, .	Thomson-Houston, Schuy- ler, . . . . .	230	122	1,200	Dark till 12.30 A.M., .	When there is no moon, . . . .	—	90 <sup>1</sup>	—	70
Pittsfield E. L. Co., .	Thomson-Houston, .	95	32	1,200	From dark till 12.30 A.M., .	25, . . . .	Abt. 0.25	33	1,200	12
Plymouth, . . . . .	Ball, . . . . .	35	14	1,600	Eight, . . . . .	25, . . . .	Abt. 0.30	24	1,600	16
Salem, . . . . .	Thomson-Houston, .	270	132	2,000	Dusk to daylight, . .	Every night, .	0.47	Abt. 120	2,000	Abt. 35
Somerville, . . . . .	American, . . . . .	100	54	2,000	Until 1 A.M., . . . .	Every night, .	0.45	20	2,000	16
Southbridge, . . . .	Thomson-Houston, .	100	43	1,200	A.V. in Nov. 7 hours, .	Every night, .	0.37	38	1,200	19
Spencer, . . . . .	Ball, . . . . .	70	60	1,200	Till 11 P.M., . . . .	23, . . . .	0.27	1	1,200	1
Taunton, . . . . .	Arnonx, . . . . .	65	26	2,000	Eight, . . . . .	20 to 22, . .	0.33½	40	2,000	10
United (Springfield), .	Thomson-Houston, .	233	50	2,000	All night, . . . . .	Every night, .	0.50	130	2,000	Abt. 53
Wachusett (Fitchburg), .	Thomson-Houston, .	130	50	2,000	From dark till midnight, light nights, . . . .	Every night, .	0.60	70	2,000	25
Waltham, . . . . .	Thomson-Houston, .	100	31	1,200	Sunset to 1 A.M., . .	Every night, .	0.25	18	1,200	6
Westborough, . . . .	Thomson-Houston, .	30	6	1,200	Dark to 11.30 P.M., .	Every night, .	0.35	18	1,200	18
Westfield, . . . . .	Schuyler, . . . . .	110	30	2,000	Until 1 A.M., . . . .	Every night, .	Abt. 0.22	34	1,200	20
Woburn, . . . . .	Brush, . . . . .	45	40	1,200	—	Every night, <sup>2</sup> .	0.27½	—	—	—
Worcester, . . . . .	Thomson-Houston, .	395	133	2,000	From dark to daylight, .	Every night, .	0.55	235	2,000	65

<sup>1</sup> Includes the incandescent lights in use, as reduced to an equivalent in arcs.<sup>2</sup> Not returned.

*Incandescent Lighting.*

NAME OF COMPANY.	SYSTEM USED.	Maximum capacity, 16 c. p. lamps.	Number of Public Lights.	Nominal Candle-Power.	Number of Hours Burnt per Night.	Number of Nights per Month.	Price per Night.	Number of Commercial Lights.	Nominal Candle-Power.	Number of Customers.
Beverly, . . . .	Thomson-Houston, .	165	-	-	-	-	-	10	65 and 32	3
Boston, . . . .	Brush-Swan, Weston, .	4,200	344	16-32-65 and 125	-	-	-	1,500	16-32-65 and 125	118
Brookline, . . .	Thomson-Houston & Sun, . . . .	300	2	65	-	-	-	113	16 to 25	8
Cambridge, . . .	Weston, . . . .	12,500	12	16	-	-	-	1,050	16	-
Charlestown, . .	Weston (Multiple Series), . . .	-	-	-	-	-	-	72	20	8
Edison (Boston), .	Brush (from arc circuit), . . .	12,000	-	-	-	-	-	8,500	From 4 to 100	200
Edison (Brookton),	Edison, . . . .	2,000	-	-	-	-	-	3,600	10	201
	Edison, . . . .	800	466	15-20-30	From sundown to 1 A. M., .	Every night, .	{ \$15 per 18 per 22 year. }	-	-	-
Edison (Fall River),	Edison Municipal, .	3,680	-	-	-	-	-	2 4,300	{ 10-16-20-24-32 } 50 and 100	228
Edison (Lawrence),	Edison, . . . .	5,400	{ 432 116 7 }	10 { 16 32 }	Until 11:30 P. M., .	Every night, .	\$1.00 per mo. 2.70 per mo.	2 4,250 3 3,885	From 1/4 to 100 c.p.	225 280
Edison (New Bedford),	Edison, . . . .	3,400	-	-	-	-	-	35	30	12
Elec. Lt. & Pal. Flooring Co. (Amesbury), .	Thomson-Houston (from arc circuit), . .	1,000	-	-	-	-	-	600	20	Abt. 150
Essex (Haverhill),	Thomson-Houston, .	75	-	-	-	-	-	80	16	15
Framingham, . .	Thomson-Houston, .	-	-	-	-	-	-	-	-	-
Franklin, . . . .	Thomson-Houston (from arc circuit), . .	-	-	-	-	-	-	37	65 and 32	14
Gloucester, . . .	Thomson-Houston (from arc circuit), . .	-	-	-	-	-	-	80	65	25
Greenfield, . . .	Sawyer-Manu, . .	800	4 series.	32	-	-	-	700	64-72-20	64
Hudson, . . . .	Thomson-Houston (are and incandescent),	200	8 series.	65	-	-	-	190	16	18
Lynn, . . . .	Thomson-Houston, .	400	-	-	-	-	-	384	16-32-65	28
Malden, . . . .	Thomson-Houston, .	200	-	-	-	-	-	190	21	19

<sup>1</sup> All were run on incandescent lamps.<sup>2</sup> Ten candle-power.<sup>3</sup> Equal to 6,273 lamp of ten candle-power.

*Incandescent Lighting — Concluded.*

NAME OF COMPANY.	SYSTEM USED.	Maximum dynamometer capacity, 16 c. p. lamps.	Number of Public Lights.	Nominal Candle- Power.	Number of Hours Burnt per Night.	Number of Nights per Month.	Price per Night.	Number of Commer- cial Lights.	Nominal Candle- Power.	Number of Customers
Marlborough, . . .	Schuyler (series from are circuit), . . .	240	—	—	—	—	—	—	16	17
Middlesex (Lowell), . . .	Thomson-Houston, . . .	600	—	—	—	—	—	—	16	20
Milford, . . .	Brush-Swan, . . .	600	—	—	—	—	—	—	16	56
Milbury, . . .	Thomson-Houston (from are circuit), . . .	—	—	—	—	—	—	—	16-32-65	20
Natick, . . .	Thomson-Houston, . . .	400	—	—	—	—	—	—	20	35
New Bedford, . . .	Thomson-Houston (from are circuit), . . .	—	—	—	—	—	—	—	16	6
Newburyport, . . .	Thomson-Houston, . . .	400	—	—	—	—	—	—	20-32-65	52
Newton, . . .	Thomson-Houston, . . .	900	43	25	—	—	—	—	20	24
North Adams, . . .	Thomson-Houston (from are circuit), . . .	—	—	—	—	—	—	—	20-32-65	7
Northampton, . . .	Sawyer-Mann, . . .	400	—	—	—	—	—	—	20	45
North Attleborough, . . .	Thomson-Houston (from are circuit), . . .	—	—	—	—	—	—	—	—	—
Pittsfield Ill. Co., . . .	Westinghouse, . . .	1,600	—	—	—	—	—	1,000	16	123
Pittsfield E. L. Co., . . .	Thomson-Houston (from are circuit), . . .	—	—	—	—	—	—	—	20-65	4
Plymouth, . . .	Ball, . . .	—	—	—	—	—	—	—	16	4
Salem, . . .	Sawyer-Mann, . . .	250	—	—	—	—	—	—	16 to 65	Abt. 18
Somerville, . . .	American (from are cir- cuit), . . .	—	—	—	—	—	—	—	25 to 125	7
Southbridge, . . .	Thomson-Houston, . . .	—	—	—	—	—	—	—	16 to 65	17
Taunton, . . .	Brush-Swan, . . .	300	—	—	—	—	—	—	16	45
United (Springfield), . . .	Westinghouse, . . .	1,950	—	—	—	—	—	—	10 to 150	50
Wachusett (Fitchburg), . . .	Mather & Thompson- Houston alternating, . . .	500	—	—	—	—	—	—	16	23
Waltham, . . .	Thomson-Houston, . . .	400	32	16 and 65	Sunset to 1 A. M., . . .	Every night, . . .	—	150	20-32-65	59
Westborough, . . .	Thomson-Houston, . . .	300	—	—	—	—	—	118	16 and 20	16
Westfield, . . .	Schuyler (from are cir- cuit), . . .	—	—	—	—	—	—	—	75 to 16	17
Woburn, . . .	Edison, Sun, . . .	750	—	—	—	—	—	46	13	69
Worcester, . . .	Thomson-Houston, . . .	800	—	—	—	—	—	348	20	22

<sup>1</sup> Equal to 10 are lights of 1,200 candle-power.<sup>2</sup> Not given.

The following table shows the lighting companies supplying power, the kind of motors used, the number of motors in use and the aggregate horse-power supplied:—

NAME OF COMPANY.	Kind of Motors used.	Number of Motors in use.	Aggregate Horse-Power Supplied.
Boston, . . . . .	Weston, Baxter, "C. & C." and Brush, . . . . .	31	48
Brookline, . . . . .	Sprague, . . . . .	1	5
Edison (Boston), . . . .	Sprague, . . . . .	80	250
Edison (Brockton), . . . .	Sprague and "C. & C.," . . . .	5	7
Edison (Fall River), . . . .	Sprague and "C. & C.," . . . .	14	20
Edison (Lawrence), . . . .	Sprague, . . . . .	18	36 $\frac{1}{2}$
Edison (New Bedford), . . . .	Sprague, . . . . .	16	23
Middlesex (Lowell), . . . .	Thomson-Houston, . . . .	6	18
Milford, . . . . .	Sprague, . . . . .	2	12
Newburyport, . . . . .	Thomson-Houston, . . . .	2	3
Northampton, . . . . .	Sprague, . . . . .	1	$\frac{1}{2}$
United (Springfield), . . . .	Sprague and Thomson-Houston, . . . . .	1	1

<sup>1</sup> Not returned.

#### ISOLATED PLANTS.

The growth of isolated electric light plants in this State is very rapid. It is difficult to get complete information in regard to the number and capacity, but the following facts obtained from reliable sources give a pretty clear idea of the extent of this branch of the electric lighting business:—

There are more than 250 of these plants in the State. Of this number about 190 furnish incandescent lights and have a total capacity of over 58,000 lights. There are 62 plants furnishing arc lights, with a total capacity of 2,350 lights.

These plants are used largely in mills, manufactories and commercial houses where there is power used for other purposes.

#### AUTHORIZATION OF GAS COMPANIES TO FURNISH ELECTRIC LIGHT.

This Board by an act of the last Legislature, chapter 385, printed in the Appendix, is given the power to authorize gas companies to engage in electric lighting.

Prior to the passage of the act four gas companies also furnished electric light, namely, the Charlestown Gas Company, the Cottage City Gas Company, the Spencer Gas Company and the Waltham Gas Light Company. Three other companies, the Dedham and Hyde Park Gas Light Company, Marblehead Gas Light Company and Woburn Gas Light Company, were by special acts in 1886 allowed to do the same, but neither of these has as yet exercised the right.

During the year the Board gave permission to the gas companies to do electric lighting in Clinton, Westfield, Brookline and Lawrence.

This table shows the date of the order giving authority, the time allowed for procuring a plant and the minimum capacity of the same : —

NAME OF COMPANY.	Date of Order.	Time allowed.	Minimum Capacity.
Clinton, .	Aug. 19	6 mos.	90 arc lights of nominally 1,200 candle-power each.
Westfield,	Sept. 23	6 mos.	100 arc lights of nominally 2,000 candle-power each.
Brookline,	Oct. 10	6 mos.	180 arc lights of nominally 1,200 candle-power each, 100 arc lights of nominally 2,000 candle-power each, and 300 incandescent lights of nominally 16 candle-power each.
Lawrence,	Nov. 12	6 mos.	90 arc lights of nominally 2,000 candle-power each.

In each case the Board gave a hearing, fourteen days' notice of which had been first served upon the gas company, the electric light companies, the city or town in which they were located, and by newspaper publication.

The Commissioners have construed the act as conferring on them the power and duty of deciding, by the exercise of a broad discretion, whether the request of a company should be allowed or refused.

The parties in interest are the consumers and the owners of the capital invested in the gas and electric light business. The convenience, comfort and pecuniary benefit to the community are surely of the first importance. Capital on the other hand, pru-



dently devoted to these objects, is entitled to a fair compensation. The Board has endeavored to exercise due and impartial regard for the stockholders in either class of companies, keeping constantly in mind that the public good demands that the light, whether from gas or electricity, be manufactured in the most economical way, and sold at the lowest remunerative prices. As a rule, in the towns and smaller cities there is an apparent advantage in having both kinds of light supplied by one company; and evidently this view was taken by the Legislature in granting the gas companies in several such places, by special acts, authority to engage in electric lighting. For this reason the Board has looked with favor upon the union of the gas company and any existing electric light companies in such municipalities.

In this connection the capitalization, or amount of capital employed in the enterprise, is an important element. It should be kept as low as possible. Needless outlay, by reason of competition, should be avoided and saved, for when it has been once incurred, and money paid and expended in enterprises not required to supply the public wants, so great is the expectation of gain, and so persistent and unyielding the demands of capital for dividends, the remedy is not then easily found or applied, and the evil should be prevented at the outset by keeping the capitalization on the proper basis.

In each instance where authority has been granted by the Board the petitioning gas company had bargained for an electric plant, already in operation in the locality, provided its petition should be allowed.

In Clinton the electric light plant was owned by three individuals who were officers and stockholders in the gas company. In the Westfield case the gas company had bought the electric plant provisionally and desired to move it to the gas works, and the counsel representing both companies also appeared for the town in behalf of the application. At Brookline the electric plant was already built upon the land of the gas company, and was owned wholly or chiefly by holders of stock in the latter company.

Only in the Lawrence case was there any positive remonstrance. The Edison Electric Illuminating Company of Lawrence appeared by its president and treasurer in opposition to the petition of the

Lawrence Gas Company, which was represented by its agent. The city solicitor of Lawrence was present in behalf of the city at the hearing, but took no active part, for the reason expressed by him that it did not appear that the city was specially interested in the matter.

Before presenting its petition the gas company, by the requisite vote of two-thirds of its stockholders, had decided to engage in electric lighting if it could obtain the authority, and had purchased, conditionally, the franchise and plant of the Lawrence Electric Light Company, there being two electric light companies in that city, and a majority of the stock of this electric light company had been secured by persons largely interested in the gas company. The two electric light companies were formed and began business in Lawrence in 1882. It was shown at the hearing that it had become necessary to move the plant of the Lawrence Electric Light Company to another location, and to substitute steam for water power, which had not, for certain reasons, proved satisfactory, and that the gas company had ample room at its works for the electric plant.

It was claimed by the petitioners and conceded by the remonstrants that, in this instance, the gas company could supply electric light more cheaply than could be done by either of the electric light companies; and this was strongly pressed by the agent of the gas company as a reason for granting the petition, and was urged by the Edison company on the other hand as good ground for a refusal. The remonstrants, while admitting that they could not successfully compete in the cost and price of electric light with the gas company, which was also the stronger financially, expressed the opinion that it was unfair, after their efforts and outlay to meet the public need, that they should be placed in a position which must lead to unequal competition.

Early in the proceedings a willingness or desire was shown on the part of the gas company to purchase the Edison plant at what the former might deem a fair valuation, and, perhaps, an equal disposition was manifested on the part of the Edison people in favor of a sale. To this end negotiations were carried on until the gas company made an offer, to remain open for thirty days,

for the property of the Edison company ; and the holders of the Edison stock, or nearly all of it, made a proposition to sell the same at a stated price. The difference in the two proposals, on a money basis, was not so great that either could be regarded as unreasonable or unfair, and either could be accepted without doing marked injustice. Both companies showed an intention to deal fairly. Such being the situation, the Board felt that they would undoubtedly come together upon equitable terms, and that the people of Lawrence would be greatly benefited in the end and permanently by favorable action on the petition. The authority asked for was accordingly granted the gas company.

Incidentally the question has arisen, how far a gas company ought to limit itself by contract to the use of any one system of electric lighting. The Board regards such restrictions as impolitic and unwise, and has advised against them. A company proposing to supply a community with the light it may need ought to be free to adopt any and all improvements which the future may develop, and however meritorious or wonderful the inventions and devices of to-day, it can scarcely be doubted that others still better will be discovered hereafter.

At the close of the year petitions of the gas companies in Chelsea, New Bedford and Holyoke for authority to furnish electric light were pending before the Board.

#### CONCLUSION.

At some time it may be thought desirable to allow gas companies, if they supply electric light, to adopt a corporate name which shall indicate also that branch of their business, and to confer upon the Board authority, in its discretion, to investigate accidents caused by gas or electricity. These matters are perhaps not sufficient of themselves to call for legislative action, but ought properly be considered in connection with others more important if such should be proposed.

The statutes placing gas and electric light companies under the supervision of the Board are of such recent origin that it is not deemed expedient to suggest any specific modifications of them at the present time.

If legislation shall be sought affecting these companies or the business in which they are engaged, as will doubtless be the case, the members of the Board will always be ready to furnish to any legislative committee all information in their power.

ABRAHAM B. COFFIN,  
EDWARD T. ROWELL,  
FORREST E. BARKER,

*Board of Gas Commissioners.*

JAN. 3, 1888.

## APPENDIX A.

## BALANCE SHEETS JUNE 30, 1887.

## ADAMS GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$20,600 00
Machinery and manufacturing appliances, } . . . . .	5,720 42
Street mains, }	
Meters, }	
Cash on hand, . . . . .	128 00
Due for gas, . . . . .	1,922 17
Other accounts due the Company, . . . . .	5,450 67
Coal on hand, . . . . .	1,555 20
Tar on hand, . . . . .	238 50
Office furniture, . . . . .	200 00
Notes receivable, . . . . .	3,076 44
Total assets, as per books of the Company, . . . . .	\$38,891 40

## LIABILITIES.

Capital stock, . . . . .	\$17,300 00
Unpaid bills, . . . . .	2,021 92
Total liabilities, as per books of the Company, . . . . .	\$19,321 92
Profit and loss balance, . . . . .	19,569 48
	\$38,891 40

## AMESBURY AND SALISBURY GAS LIGHT COMPANY.

## ASSETS.

Street mains, } . . . . .	\$3,801 96
Meters, }	
Due for gas, . . . . .	487 69
Total assets, as per books of the Company, . . . . .	\$4,289 65

## LIABILITIES.

Capital stock, . . . . .	\$1,250 00
Unpaid bills, . . . . .	1,017 25
Total liabilities, as per books of the Company, . . . . .	\$2,267 25
Profit and loss balance, . . . . .	2,022 40
	\$4,289 65

## AMHERST GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$635 85
Machinery and manufacturing appliances, . . . . .	7,722 81
Street mains, . . . . .	6,124 81
Meters, . . . . .	986 44
Cash on hand, . . . . .	209 50
Due for gas, . . . . .	574 49
Coke on hand, . . . . .	47 50
Enrichers on hand, . . . . .	346 04
Other materials on hand, . . . . .	56 46

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Total assets, as per books of the Company, . . . \$16,703 90

## LIABILITIES.

Capital stock, . . . . .	\$10,000 00
Notes payable, . . . . .	1,500 00
Unpaid bills, . . . . .	408 62

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Total liabilities, as per books of the Company, . . \$11,908 62

Profit and loss balance, . . . . . 4,795 28

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\$16,703 90

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## ARLINGTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$1,000 00
Machinery and manufacturing appliances, . . . . .	35,000 00
Street mains, . . . . .	34,000 00
Cash on hand, . . . . .	4,345 82
Due for gas, . . . . .	3,129 31
Coal on hand, . . . . .	1,520 81

---

Total assets, as per books of the Company, . . . \$78,995 94

## LIABILITIES.

Capital stock, . . . . .	\$70,000 00
Scrap, . . . . .	162 00
Unpaid dividends, . . . . .	714 00
Amounts due from the Company, not included above, . . . . .	94 05

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Total liabilities, as per books of the Company, . . \$70,970 05

Profit and loss balance, . . . . . 8,025 89

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\$78,995 94

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## ATTLEBOROUGH GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$3,058 16
Machinery and manufacturing appliances, . . . . .	23,564 06
Street mains, . . . . .	8,448 36
Meters, . . . . .	1,652 56
Cash on hand, . . . . .	732 46
Due for gas, . . . . .	1,316 23
Other accounts due the Company, . . . . .	77 90
Coal on hand, . . . . .	1,510 00
Coke on hand, . . . . .	35 00
Tar on hand, . . . . .	150 00
Enrichers on hand, . . . . .	4 40
Purifying materials on hand, . . . . .	22 00
Fixtures on hand, . . . . .	263 32
Office furniture, . . . . .	129 40

Total assets, as per books of the Company, . . . \$40,963 85

## LIABILITIES.

Capital stock, . . . . .	\$23,200 00
Notes payable, . . . . .	4,000 00

Total liabilities, as per books of the Company, . . \$27,200 00

Profit and loss balance, . . . . . 13,763 85

\$40,963 85

## THE BAY STATE GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$76,000 00
Machinery and manufacturing appliances, } . . . . .	500,000 00
Street mains and buildings, }	
Notes receivable, . . . . .	50,956 16
Patent rights, . . . . .	250,000 00

Total assets, as per books of the Company, . . \$876,956 16

## LIABILITIES.

Capital stock, . . . . .	\$500,000 00
Bonds issued. [See note.]	

Total liabilities, as per books of the Company, . . \$500,000 00

Profit and loss balance, . . . . . 376,956 16

\$876,956 16

NOTE.—The company is indebted under the terms of a contract entered into and executed by it on the 11th day of March, A. D. 1885, by which contract it agreed to pay \$4,500,000 in ninety-nine years from said date, in consideration of a contract made with it of even date, for the erection and completion of its plant and works. The exact amount of its indebtedness cannot, therefore, be accurately stated until said contract is completed.

## BEVERLY GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$23,000 00
Machinery and manufacturing appliances, . . . . .	8,000 00
Street mains, . . . . .	15,000 00
Meters, . . . . .	3,000 00
Cash on hand, . . . . .	396 33
Due for gas, . . . . .	2,171 52
Other accounts due the Company, . . . . .	190 02
Coal on hand, . . . . .	720 35
Coke on hand, . . . . .	1 00
Tar on hand, . . . . .	85 00
Enrichers on hand, . . . . .	32 00
Other materials on hand, . . . . .	50 00
Fixtures on hand, . . . . .	240 52
Office furniture, . . . . .	239 00

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Total assets, as per books of the Company, . . . \$53,125 74

## LIABILITIES.

Capital stock, . . . . .	\$40,000 00
Special stock, . . . . .	11,800 00
Unpaid bills, . . . . .	1,056 95

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Total liabilities, as per books of the Company, . . \$52,856 95

Profit and loss balance, . . . . . 268 79

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\$53,125 74

## BOSTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$1,354,814 86
Machinery and manufacturing appliances, . . . . .	950,000 00
Street mains, . . . . .	250,000 00
Meters, . . . . .	5,000 00
Cash on hand, . . . . .	186,443 01
Due for gas, . . . . .	157,651 71
Coal on hand, . . . . .	89,691 12
Coke on hand, . . . . .	4,472 00
Tar and ammoniacal liquor on hand, . . . . .	4,235 87
Enrichers on hand, . . . . .	25,384 52
Purifying materials on hand, . . . . .	1,500 00
Other materials on hand, . . . . .	22,607 14

---

Total assets, as per books of the Company, . . \$3,051,800 23



## LIABILITIES.

Capital stock, . . . . .	\$2,500,000 00
Unpaid bills, . . . . .	42,245 56
Deposits, . . . . .	15,709 00
Unpaid dividends, . . . . .	7,262 50
Depreciation fund, for insurance, bad debts, etc., . . . . .	330,491 42
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$2,895,708 48
Profit and loss balance, . . . . .	156,091 75
<hr/>	
	\$3,051,800 23

## BROCKTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$49,000 00
Machinery and manufacturing appliances, } . . . . .	59,171 74
Street mains, }	
Meters, }	
Cash on hand, . . . . .	2,600 58
Coal on hand, . . . . .	365 36
Other materials on hand, . . . . .	94 13
Stoves on hand, . . . . .	401 91
<hr/>	
Total assets, as per books of the Company, . . . . .	\$111,633 72

## LIABILITIES.

Capital stock, . . . . .	\$64,000 00
Bonds issued, . . . . .	35,000 00
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$99,000 00
Profit and loss balance, . . . . .	12,633 72
<hr/>	
	\$111,633 72

## BROOKLINE GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$147,700 00
Machinery and manufacturing appliances, . . . . .	41,045 60
Street mains, . . . . .	199,584 45
Meters, . . . . .	9,097 35
Cash on hand, . . . . .	2,516 43
Due for gas, . . . . .	14,991 40
Other accounts due the Company, . . . . .	2,379 00
Coal on hand, . . . . .	4,725 00
Coke on hand, . . . . .	100 0

Enrichers on hand, . . . . .	\$106 87
Purifying materials on hand, . . . . .	471 00
Other materials on hand, . . . . .	1,085 69
Horses, wagons, etc., . . . . .	1,730 00
Office furniture, . . . . .	460 00
Notes receivable, . . . . .	5,000 00

---

Total assets, as per books of the Company, . . . \$430,992 79

## LIABILITIES.

Capital stock, . . . . .	\$350,000 00
Notes payable, . . . . .	55,000 00
Unpaid bills, . . . . .	2,113 52
Deposits, . . . . .	224 00

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Total liabilities, as per books of the Company, . . . \$407,337 52

Profit and loss balance, . . . . . 23,655 27

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\$430,992 79

## CAMBRIDGE GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$64,547 01
Machinery and manufacturing appliances, . . . . .	658,371 24
Street mains, . . . . .	2,690 02
Cash on hand, . . . . .	8,032 32
Due for gas, . . . . .	31,845 17
Other accounts due the Company, . . . . .	2,938 44
Coal on hand, . . . . .	7,786 28
Coke on hand, . . . . .	1,200 00
Tar on hand, . . . . .	225 00
Purifying materials on hand, . . . . .	300 00
Other materials on hand, . . . . .	5,447 44
Notes receivable, . . . . .	257 00
Investments, . . . . .	104,567 46

---

Total assets, as per books of the Company, . . . \$888,207 38

## LIABILITIES.

Capital stock, . . . . .	\$700,000 00
Unpaid bills, . . . . .	2,080 59
Deposits, . . . . .	875 00
Unpaid dividends, . . . . .	70 00
Amounts due from the Company, not included above, . . . . .	45 00

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Total liabilities, as per books of the Company, . . . \$703,070 59

Profit and loss balance, . . . . . 185,136 79

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\$888,207 38

## CHARLESTOWN GAS COMPANY.

## ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters,		
Cash on hand,		2,034 00
Due for gas,		16,906 55
Other accounts due the Company,		2,328 35
Coal on hand,		9,002 29
Enrichers on hand,		621 80
Investments,		35,950 00
Total assets, as per books of the Company,		\$585,114 96

## LIABILITIES.

LIABILITIES.									
Capital stock,	.	.	.	.	.	.	.	.	\$500,000 00
Notes payable,	.	.	.	.	.	.	.	.	12,000 00
Unpaid bills,	.	.	.	.	.	.	.	.	2,116 62
Deposits,	.	.	.	.	.	.	.	.	480 50
Unpaid dividends,	.	.	.	.	.	.	.	.	945 00
Reserved fund,	.	.	.	.	.	.	.	.	35,950 00
Suspense account,	.	.	.	.	.	.	.	.	404 77
Total liabilities, as per books of the Company,									\$551,896 89
Profit and loss balance,	.	.	.	.	.	.	.	.	33,218 07
									<hr/>
									\$585,114 96

## CHELSEA GAS LIGHT COMPANY.

## ASSETS.

ASSETS.			
Real estate, . . . . .	. . . . .	\$161,822	79
Machinery and manufacturing appliances, )			
Street mains, )	. . . . .	150,000	00
Meters, )			
Cash on hand. . . . .	. . . . .	9,201	61
Due for gas, . . . . .	. . . . .	8,513	26
Other accounts due the Company, . . . . .	. . . . .	708	28
Tar on hand, . . . . .	. . . . .	200	00
Stoves and Lungren burners on hand, . . . . .	. . . . .	744	07
Total assets, as per books of the Company, . . . . .		\$331,190	01

## LIABILITIES.

LIABILITIES.									
Capital stock,	.	.	.	.	.	.	.	.	\$300,000 00
Deposits,	.	.	.	.	.	.	.	.	690 00
Unpaid dividends,	.	.	.	.	.	.	.	.	96 00
									<hr/>
Total liabilities, as per books of the Company,	.	.	.	.	.	.	.	.	\$300,786 00
Profit and loss balance,	.	.	.	.	.	.	.	.	30,404 01
									<hr/>
									\$331,190 01

## CHICOPEE GAS WORKS.

## ASSETS.

Real estate,	}	. . .	\$30,000 00
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			314 00
Other accounts due the Company, . . . . .			190 00
Coal on hand, . . . . .			1,252 00
Coke on hand, . . . . .			18 00
Purifying materials on hand, . . . . .			64 00
Notes receivable, . . . . .			32,800 00
Total assets, as per books of the Company, . . . . .			\$64,638 00

## LIABILITIES.

Capital stock, . . . . .	\$30,000 00
<hr/>	
Total liabilities, as per books of the Company, . . .	\$30,000 00
Profit and loss balance, . . . . .	34,638 00
<hr/>	
	\$64,638 00

## CITIZENS' GAS LIGHT COMPANY OF QUINCY.

## ASSETS.

Real estate,	}	. . .	\$42,894 76
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			369 28
Due for gas, . . . . .			908 31
Coal on hand, . . . . .			1,529 06
Coke on hand, . . . . .			20 00
Tar on hand, . . . . .			30 00
Enrichers on hand, . . . . .			12 00
Purifying materials on hand, . . . . .			50 00
Stoves on hand, . . . . .			100 00
Fixtures on hand, . . . . .			200 00
Horses, wagons, etc., . . . . .			150 00
Office furniture, . . . . .			100 00
Total assets, as per books of the Company, . . . . .			\$46,363 41
Profit and loss balance, . . . . .			676 09
			\$47,039 50

## LIABILITIES.

Capital stock, . . . . .	\$33,000 00
Notes payable, . . . . .	13,514 50
Unpaid bills, . . . . .	250 00
Interest due but not paid, . . . . .	275 00

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Total liabilities, as per books of the Company, . . . \$47,039 50

## CITIZENS' GAS LIGHT COMPANY OF SOUTH READING.

## ASSETS.

Real estate,	}	. . .	\$95,300 00
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			3,366 24
Due for gas, . . . . .			3,536 56
Coal on hand, . . . . .			405 76
Tar on hand, . . . . .			150 00
Purifying materials on hand, . . . . .			7 04

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Total assets, as per books of the Company, . . . \$102,765 60

## LIABILITIES.

Capital stock, . . . . .	\$95,300 00
Unpaid dividends, . . . . .	286 00

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Total liabilities, as per books of the Company, . . . \$95,586 00

Profit and loss balance, . . . . . 7,179 60

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\$102,765 60

## CLINTON GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	. . .	\$27,000 00
Machinery and manufacturing appliances,			
Street mains, . . . . .			
Meters, . . . . .			
Cash on hand, . . . . .			3,798 80
Coal on hand, . . . . .			1,237 61
Coke on hand, . . . . .			48 08
Tar on hand, . . . . .			273 00
Enrichers on hand, . . . . .			1 59
Purifying materials on hand, . . . . .			100 00
Other materials on hand, . . . . .			381 16
Office furniture, . . . . .			200 00

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Total assets, as per books of the Company, . . . \$42,440 24

## LIABILITIES.

Capital stock, . . . . .	\$35,000 00
Total liabilities, as per books of the Company, . . .	\$35,000 00
Profit and loss balance, . . . . .	7,440 24
	<hr/>
	\$42,440 24

## COTTAGE CITY GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$500 00
Machinery and manufacturing appliances, } . . . .	60,004 25
Street mains, } . . . .	
Meters, } . . . .	
Electric light plant, . . . . .	20,000 00
Cash on hand, . . . . .	282 64
Other accounts due the Company, . . . . .	24 70
Total assets, as per books of the Company, . . . .	\$80,811 59
Profit and loss balance, . . . . .	827 51
	<hr/>
	\$81,639 10

## LIABILITIES.

Capital stock, . . . . .	\$60,000 00
Notes payable, . . . . .	21,240 00
Amounts due from the Company, not included above, . .	399 10
Total liabilities, as per books of the Company, . . .	\$81,639 10

## DANVERS GAS LIGHT COMPANY.

## ASSETS.

Construction account, . . . . .	\$20,000 00
Street mains, . . . . .	21 00
Meters, . . . . .	65 25
Cash on hand, . . . . .	128 98
Due for gas, . . . . .	118 26
Other accounts due the Company, . . . . .	97 05
Coal on hand, . . . . .	840 26
Tar on hand, . . . . .	18 75
Office furniture, . . . . .	35 00
Total assets, as per books of the Company, . . . .	\$21,324 55
Profit and loss balance, . . . . .	1,035 72
	<hr/>
	\$22,360 27

## LIABILITIES.

Capital stock, . . . . .	\$20,000 00
Bonds issued, . . . . .	2,000 00
Unpaid bills, . . . . .	360 27

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Total liabilities, as per books of the Company, . . . \$22,360 27

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## DEDHAM AND HYDE PARK GAS AND ELECTRIC LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$8,009 05
Machinery and manufacturing appliances, . . . . .	13,267 41
Street mains, . . . . .	19,660 23
Meters, . . . . .	1,553 74
Cash on hand, . . . . .	24 07
Due for gas, . . . . .	671 69
Other accounts due the Company, . . . . .	175 84
Coal on hand, . . . . .	4,350 58
Coke on hand, . . . . .	27 00
Tar on hand, . . . . .	226 50
Other materials on hand, . . . . .	100 00
Horses, wagons, etc., . . . . .	240 00
Office furniture, . . . . .	141 00

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Total assets, as per books of the Company, . . . \$48,447 11

Profit and loss balance, . . . . . 62,949 64

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\$111,396 75

## LIABILITIES.

Capital stock, . . . . .	\$100,000 00
Notes payable, . . . . .	11,000 00
Unpaid bills, . . . . .	396 75

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Total liabilities, as per books of the Company, . . . \$111,396 75

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## DORCHESTER GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	}	. . . \$451,873 95
Machinery and manufacturing appliances, . . . . .		
Street mains, . . . . .		
Meters, . . . . .		1,939 95
Cash on hand, . . . . .		6,772 80

Due for gas, . . . . .	\$9,759 73
Other accounts due the Company, . . . . .	3,228 18
Coal on hand, . . . . .	12,977 35
Coke on hand, . . . . .	71 25
Tar on hand, . . . . .	30 00
Enrichers on hand, . . . . .	336 11
Purifying materials on hand, . . . . .	286 00
Other materials on hand, . . . . .	3,043 75
Fixtures on hand, . . . . .	179 00
Notes receivable, . . . . .	30,000 00

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Total assets, as per books of the Company, . . . \$520,498 07

#### LIABILITIES.

Capital stock, . . . . .	\$400,000 00
Unpaid bills, . . . . .	9,409 90
Deposits, . . . . .	35 00

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Total liabilities, as per books of the Company, . . \$409,444 90

Profit and loss balance, . . . . . 111,053 17

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\$520,498 07

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### EAST BOSTON GAS COMPANY.

#### ASSETS.

Real estate,	}	. . .	\$221,731 91
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			16,466 17
Due for gas, . . . . .			5,019 06
Coal on hand, . . . . .			2,382 47
Purifying materials on hand, . . . . .			194 70
Other materials on hand, . . . . .			2,367 56
Investments, . . . . .			34,000 00

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Total assets, as per books of the Company, . . . \$282,161 87

#### LIABILITIES.

Capital stock, . . . . .	\$220,000 00
Unpaid dividends, . . . . .	8,800 00
Amounts due from the Company, not included above, . . . . .	6 30

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Total liabilities, as per books of the Company, . . \$228,806 30

Profit and loss balance, . . . . . 53,355 57

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\$282,161 87



## EASTHAMPTON GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$9,500 00
Machinery and manufacturing appliances, . . . . .	10,500 00
Street mains, . . . . .	8,000 00
Meters, . . . . .	500 00
Cash on hand, . . . . .	1,933 04
Due for gas, . . . . .	1,095 10
Other accounts due the Company, . . . . .	2 36
Coal on hand, . . . . .	78 75
Tar on hand, . . . . .	18 75
Enrichers on hand, . . . . .	109 75
Purifying materials on hand, . . . . .	103 60
Other materials on hand, . . . . .	68 70
Notes receivable, . . . . .	3,000 00

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Total assets, as per books of the Company, . . . . . \$34,910 05

## LIABILITIES.

Capital stock, . . . . .	\$30,000 00
Unpaid bills, . . . . .	151 39

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Total liabilities, as per books of the Company, . . . . . \$30,151 39

Profit and loss balance, . . . . . 4,758 66

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\$34,910 05

## FALL RIVER GAS WORKS COMPANY.

## ASSETS.

Real estate, . . . . .	\$150,000 00
Machinery and manufacturing appliances, . . . . .	35,000 00
Street mains, . . . . .	75,000 00
Meters, . . . . .	514 01
Cash on hand, . . . . .	18,939 38
Due for gas, . . . . .	4,075 72
Other accounts due the Company, . . . . .	3,973 70
Coal on hand, . . . . .	1,855 93
Coke on hand, . . . . .	106 61
Tar on hand, . . . . .	67 20
Purifying materials on hand, . . . . .	262 00
Other materials on hand, . . . . .	5,151 82
Stoves on hand, . . . . .	1,150 75
Fixtures on hand, . . . . .	769 25
Horses, wagons, etc., . . . . .	86 40
Office furniture, . . . . .	403 96
Extensions, gas on hand, etc., . . . . .	17,664 94

---

Total assets, as per books of the Company, . . . . . \$315,021 67

## LIABILITIES.

Capital stock, . . . . .	\$288,000 00
Unpaid bills, . . . . .	9,835 80
Deposits, . . . . .	218 30
<hr/>	
Total liabilities, as per books of the Company, . . .	\$298,054 10
Profit and loss balance, . . . . .	16,967 57
<hr/>	
	\$315,021 67

## FITCHBURG GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$32,000 00
Machinery and manufacturing appliances, } . . . . .	20,874 85
Street mains, }	
Meters, }	
Cash on hand, . . . . .	6,799 18
Due for gas, . . . . .	587 45
Coal on hand, . . . . .	300 00
Fixtures on hand, . . . . .	419 93
Notes receivable, . . . . .	4,564 37
<hr/>	
Total assets, as per books of the Company, . . . . .	\$65,545 78

## LIABILITIES.

Capital stock, . . . . .	\$60,000 00
Reserved fund, . . . . .	5,545 78
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$65,545 78

## GLOUCESTER GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$27,000 00
Machinery and manufacturing appliances, . . . . .	12,835 00
Street mains, . . . . .	20,000 00
Meters, . . . . .	2,465 00
Cash on hand, . . . . .	3,209 84
Due for gas, . . . . .	3,322 16
Other accounts due the Company, . . . . .	2,432 94
Coal on hand, . . . . .	3,026 10
Tar on hand, . . . . .	360 00
Purifying materials on hand, . . . . .	113 00
Other materials on hand, . . . . .	605 00
Stoves on hand, . . . . .	40 00

Fixtures on hand, . . . . .	\$800 00
Office furniture, . . . . .	160 00
Notes receivable, . . . . .	85 54
Investments, . . . . .	13,500 00
Total assets, as per books of the Company, . . . . .	<u>\$89,954 58</u>
LIABILITIES.	
Capital stock, . . . . .	\$62,300 00
Unpaid bills, . . . . .	1,782 57
Total liabilities, as per books of the Company, . . . . .	<u>\$64,082 57</u>
Profit and loss balance, . . . . .	25,872 01
	<u>\$89,954 58</u>

GREENFIELD GAS LIGHT COMPANY.

ASSETS.		
Real estate,	}	
Machinery and manufacturing appliances,		\$44,439 98
Street mains, . . . . .		2,790 48
Meters, . . . . .		1,353 48
Cash on hand, . . . . .		2,656 04
Due for gas, . . . . .		404 75
Coal on hand, . . . . .		210 00
Coke on hand, . . . . .		120 00
Enrichers on hand, . . . . .		10 50
Purifying materials on hand, . . . . .		15 00
Total assets, as per books of the Company, . . . . .		\$52,000 23
LIABILITIES.		
Capital stock, . . . . .		\$50,000 00
Notes payable, . . . . .		1,000 00
Total liabilities, as per books of the Company, . . . . .		\$51,000 00
Profit and loss balance, . . . . .		1,000 23
		\$52,000 23

## HAVERHILL GAS LIGHT COMPANY.

						ASSETS.		
Real estate,						}	. . .	\$75,000 00
Machinery and manufacturing appliances.								
Street mains,								
Meters,								
Cash on hand,	.	.	.	.	.			
Coal on hand,	.	.	.	.	.	.	.	796 82
Notes receivable,	.	.	.	.	.	.	.	2,781 25
Investments,	.	.	.	.	.	.	.	3,000 00
Total assets, as per books of the Company,	.	.	.	.	.	.	.	10,300 00
								\$91,878 07

## LIABILITIES.

Capital stock, . . . . .	\$75,000 00
Total liabilities, as per books of the Company, . . .	\$75,000 00
Profit and loss balance, . . . . .	16,878 07
	<hr/>
	\$91,878 07

## IPSWICH GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$3,400 00
Machinery and manufacturing appliances, . . . . .	2,000 00
Street mains, . . . . .	5,000 00
Meters, . . . . .	1,200 00
Cash on hand, . . . . .	22 86
Due for gas, . . . . .	204 00
Coal on hand, . . . . .	64 00
Total assets, as per books of the Company, . . . . .	\$11,890 86
Profit and loss balance, . . . . .	12,779 79
	<hr/>
	\$24,670 65

## LIABILITIES.

Capital stock, . . . . .	\$16,000 00
Bonds issued, . . . . .	6,600 00
Notes payable, . . . . .	400 00
Unpaid bills, . . . . .	1,466 65
Interest due but not paid, . . . . .	204 00
Total liabilities, as per books of the Company, . . . . .	\$24,670 65

## JAMAICA PLAIN GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	. . . . .	\$258,876 05
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			15,755 88
Due for gas, . . . . .			209 86
Other accounts due the Company, . . . . .			513 56
Coal on hand, . . . . .			6,006 00
Coke on hand, . . . . .			400 00
Enrichers on hand, . . . . .			195 00

Other materials on hand, . . . . .	\$600 00
Stoves and lamps on hand, . . . . .	115 85
Notes receivable, . . . . .	500 00

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Total assets, as per books of the Company, . . . \$283,172 20

#### LIABILITIES.

Capital stock, . . . . .	\$200,000 00
Notes payable, . . . . .	40,000 00

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Total liabilities, as per books of the Company, . . . \$240,000 00

Profit and loss balance, . . . . . 43,172 20

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\$283,172 20

### LAWRENCE GAS COMPANY.

#### ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters,		
Cash on hand, . . . . .		8,250 59
Due for gas, . . . . .		5,900 44
Coal on hand, . . . . .		10,619 48
Coke on hand, . . . . .		1,170 81
Tar on hand, . . . . .		1,175 20
Enrichers on hand, . . . . .		444 38
Purifying materials on hand, . . . . .		1,670 00
Other materials on hand, . . . . .		11,358 32
Stoves and fixtures on hand, . . . . .		5,230 43
Gas on hand, . . . . .		343 80
Suspense account, . . . . .		13,469 64
Notes receivable, . . . . .		1,000 00
Investments, . . . . .		98 16

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Total assets, as per books of the Company, . . . \$460,731 25

#### LIABILITIES.

Capital stock, . . . . .	\$400,000 00
Notes payable, . . . . .	33,500 00
Deposits, . . . . .	29 00

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Total liabilities, as per books of the Company, . . . \$433,529 00

Profit and loss balance, . . . . . 27,202 25

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\$460,731 25

## LEOMINSTER GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	. . .	\$54,785 66
Machinery and manufacturing appliances,			
Street mains,			
Meters, . . . . .			1,826 52
Cash on hand, . . . . .			968 31

Total assets, as per books of the Company, . . . \$57,580 49

## LIABILITIES.

Capital stock, . . . . . \$50,000 00

Total liabilities, as per books of the Company, . . \$50,000 00

Profit and loss balance, . . . . . 7,580 49

\$57,580 49

## LEXINGTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$1,514 95
Machinery and manufacturing appliances, . . . . .	21,340 11
Street mains, . . . . .	5,988 77
Meters, . . . . .	507 69
Cash on hand, . . . . .	315 65
Due for gas, . . . . .	590 25
Other accounts due the Company, . . . . .	10 80
Coal on hand, . . . . .	11 00
Enrichers on hand, . . . . .	13 00
Other materials on hand, . . . . .	355 87
Notes receivable, . . . . .	546 00

Total assets, as per books of the Company, . . . \$31,194 09

## LIABILITIES.

Capital stock, . . . . . \$20,000 00

Notes payable, . . . . . 3,272 30

Unpaid bills, . . . . . 329 45

Interest due but not paid, . . . . . 21 33

Total liabilities, as per books of the Company, . . \$23,623 08

Profit and loss balance, . . . . . 7,571 01

\$31,194 09

## LOWELL GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$75,000 00
Machinery and manufacturing appliances, }	
Street mains, }	425,000 00
Meters, }	
Cash on hand, . . . . .	32,221 36
Coal on hand, . . . . .	10,120 00
Enrichers on hand, . . . . .	258 15
Purifying materials on hand, . . . . .	270 00
Stoves on hand, . . . . .	2,113 00
New holder, . . . . .	65,036 14

Total assets, as per books of the Company, . . . \$610,018 65

## LIABILITIES.

Capital stock, . . . . .	\$500,000 00
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Total liabilities, as per books of the Company, . . \$500,000 00

Profit and loss balance, . . . . .	110,018 65
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\$610,018 65

## LYNN GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$180,000 00
Machinery and manufacturing appliances, }	
Street mains, }	120,000 00
Cash on hand, . . . . .	10,975 20
Due for gas, . . . . .	12,130 18
Other accounts due the Company, . . . . .	697 99
Coal on hand, . . . . .	1,648 96
Tar on hand, . . . . .	367 50
Enrichers on hand, . . . . .	230 00
Purifying materials on hand, . . . . .	105 00
Other materials on hand, . . . . .	1,093 49
Stoves on hand, . . . . .	108 43
Notes receivable, . . . . .	19,031 79

Total assets, as per books of the Company, . . . \$346,388 54

## LIABILITIES.

Capital stock, . . . . .	\$300,000 00
Unpaid bills, . . . . .	309 60
Deposits, . . . . .	44 47
Unpaid dividends, . . . . .	18 00

Total liabilities, as per books of the Company, . . \$300,372 07

Profit and loss balance, . . . . .	46,016 47
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\$346,388 54

## MALDEN AND MELROSE GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters, . . . . .		585 40
Cash on hand, . . . . .		8,099 34
Due for gas, . . . . .		10,266 28
Other accounts due the Company, . . . . .		1,806 40
Coal on hand, . . . . .		1,722 30
Tar on hand, . . . . .		150 00
Fixtures on hand, . . . . .		2,377 53
Notes receivable, . . . . .		57 10
Pipe account, extensions, etc., . . . . .		4,458 85

Total assets, as per books of the Company, . . . \$252,398 99

## LIABILITIES.

Capital stock, . . . . .	\$170,000 00
Bonds issued, . . . . .	50,000 00
Notes payable, . . . . .	500 00
Unpaid bills, . . . . .	4,687 75
Unpaid dividends, . . . . .	862 50

Total liabilities, as per books of the Company, . . \$226,050 25  
 Profit and loss balance, . . . . . 26,348 74

\$252,398 99

## MANUFACTURERS' GAS LIGHT COMPANY (FALL RIVER).

## ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters, . . . . .		
Cash on hand, . . . . .		1,488 36
Due for gas, . . . . .		854 98
Coal on hand, . . . . .		1,175 00
Coke on hand, . . . . .		35 00
Tar on hand, . . . . .		25 00
Stoves on hand, . . . . .		55 55

Total assets, as per books of the Company, . . . \$50,633 89

## LIABILITIES.

Capital stock, . . . . .	\$50,000 00
Total liabilities, as per books of the Company, . .	\$50,000 00
Profit and loss balance, . . . . .	633 89
	<u>\$50,633 89</u>



## MARBLEHEAD GAS AND ELECTRIC LIGHT COMPANY.

ASSETS.	
Real estate, . . . . .	\$4,957 91
Machinery and manufacturing appliances, }	
Street mains, }	21,706 71
Meters, . . . . .	1,607 25
Cash on hand, . . . . .	235 75
Due for gas, . . . . .	502 77
Coal on hand, . . . . .	1,030 00
Other materials on hand, . . . . .	50 00
Stoves on hand, . . . . .	55 00
Office furniture, . . . . .	200 00
Investments, . . . . .	106 25

Total assets, as per books of the Company, . . . . .	\$30,451 64
Profit and loss balance, . . . . .	11,384 23
	<hr/>
	\$41,835 87

LIABILITIES.	
Capital stock, . . . . .	\$40,000 00
Notes payable, . . . . .	1,500 00
Unpaid bills, . . . . .	332 87
Unpaid dividends, . . . . .	3 00

Total liabilities, as per books of the Company, . . . . .	\$41,835 87
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## MARLBOROUGH GAS LIGHT COMPANY.

ASSETS.	
Real estate, . . . . .	\$5,590 00
Machinery and manufacturing appliances, . . . . .	57,401 28
Street mains, . . . . .	664 42
Meters, . . . . .	1,089 35
Cash on hand, . . . . .	673 79
Due for gas, . . . . .	4,509 79
Other accounts due the Company, . . . . .	417 36
Coal on hand, . . . . .	687 50
Tar on hand, . . . . .	50 00
Enrichers on hand, . . . . .	47 52
Notes receivable, . . . . .	154 72

Total assets, as per books of the Company, . . . . .	\$71,285 73
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LIABILITIES.	
Capital stock, . . . . .	\$50,000 00
Unpaid dividends, . . . . .	2,875 00
Amounts due from the Company, not included above, . . . . .	8 62

Total liabilities, as per books of the Company, . . . . .	\$52,883 62
Profit and loss balance, . . . . .	18,402 11
	<hr/>
	\$71,285 73

## MILFORD GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}			
Machinery and manufacturing appliances,				
Street mains,				
Meters,				
Cash on hand,				3,122 22
Due for gas,				879 20
Coal on hand,				525 00
Coke on hand,				107 00
Tar on hand,				237 00
Purifying materials on hand,				66 00
Other materials on hand,				350 00
Office furniture,				50 00

Total assets, as per books of the Company, . . . \$106,402 42

## LIABILITIES.

Capital stock, . . . . . \$72,300 00

Total liabilities, as per books of the Company, . . . \$72,300 00

Profit and loss balance, . . . . . 34,102 42

\$106,402 42

## MILLER'S RIVER GAS LIGHT COMPANY (ATHOL).

## ASSETS.

Real estate,	}			
Machinery and manufacturing appliances,				
Street mains,				
Meters,				
Cash on hand,				487 38
Due for gas,				144 08
Other accounts due the Company,				617 81
Coal on hand,				150 00
Enrichers on hand,				17 50
Purifying materials on hand,				10 00
Other materials on hand,				160 00

Total assets, as per books of the Company, . . . \$61,586 77

Profit and loss balance, . . . . . 4,313 41

\$65,900 18

## LIABILITIES.

Capital stock, . . . . .	\$40,000 00
Bonds issued, . . . . .	20,000 00

Notes payable, . . . . .	\$706 38
Unpaid bills, . . . . .	898 70
Amounts due from the Company, not included above, . . . . .	4,295 10

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Total liabilities, as per books of the Company, . . . \$65,900 18

### MUTUAL GAS LIGHT COMPANY OF SOUTHBRIDGE.

#### ASSETS.

Real estate, . . . . .	\$5,515 49
Machinery and manufacturing appliances, . . . . .	1,041 83
Street mains, . . . . .	6,837 25
Meters, . . . . .	1,064 90
Cash on hand, . . . . .	733 12
Due for gas, . . . . .	253 05
Other accounts due the Company, . . . . .	325 53
Tar on hand, . . . . .	17 50
Other materials on hand, . . . . .	355 97
Fixtures on hand, . . . . .	62 70
Notes receivable, . . . . .	81 71

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Total assets, as per books of the Company, . . . \$16,289 05

#### LIABILITIES.

Capital stock, . . . . .	\$15,000 00
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Total liabilities, as per books of the Company, . . . \$15,000 00

Profit and loss balance, . . . . . 1,289 05

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\$16,289 05

### NATICK GAS LIGHT COMPANY.

#### ASSETS.

Real estate, . . . . .	\$16,500 00
Machinery and manufacturing appliances, } . . . . .	20,813 68
Street mains, } . . . . .	
Meters, } . . . . .	
Cash on hand, . . . . .	1,454 43
Due for gas, . . . . .	1,742 28
Coal on hand, . . . . .	165 85
Coke on hand, . . . . .	129 60
Tar on hand, . . . . .	80 00
Other materials on hand, . . . . .	41 08
Stoves on hand, . . . . .	82 25
Fixtures on hand, . . . . .	416 50

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Total assets, as per books of the Company, . . . \$41,425 67

## LIABILITIES.

Capital stock, . . . . .	\$20,000 00
Notes payable, . . . . .	10,000 00
<hr/>	
Total liabilities, as per books of the Company, . . .	\$30,000 00
Profit and loss balance, . . . . .	11,425 67
<hr/>	
	\$41,425 67

## NANTUCKET GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$3,000 00
Machinery and manufacturing appliances, . . . . .	20,000 00
Street mains, . . . . .	9,390 57
Meters, . . . . .	4,000 00
Cash on hand, . . . . .	142 05
Due for gas, . . . . .	79 87
Other accounts due the Company, . . . . .	781 93
Coal on hand, . . . . .	417 55
Coke on hand, . . . . .	20 00
Tar on hand, . . . . .	50 00
Notes receivable, . . . . .	2,000 00
Investments, . . . . .	368 00
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Total assets, as per books of the Company, . . . . .	\$40,249 97

## LIABILITIES.

Capital stock, . . . . .	\$36,000 00
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Total liabilities, as per books of the Company, . . . . .	\$36,000 00
Profit and loss balance, . . . . .	4,249 97
<hr/>	
	\$40,249 97

## NEW BEDFORD GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	}	. . . . .	\$161,164 08
Machinery and manufacturing appliances, . . . . .			
Street mains, . . . . .			115,449 66
Meters, . . . . .			31,082 22
Cash on hand, . . . . .			825 70
Due for gas, . . . . .			7,380 22
Other accounts due the Company, . . . . .			4,444 41
Coal on hand, . . . . .			4,392 00

Coke on hand, . . . . .	\$45 50
Tar on hand, . . . . .	415 25
Enrichers on hand,. . . . .	240 00
Purifying materials on hand, . . . . .	373 62
Other materials on hand, . . . . .	661 50
Stoves on hand, . . . . .	7,680 87
Fixtures on hand, . . . . .	8,626 75
Notes receivable, . . . . .	298 60
Street light account, . . . . .	2,100 00

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Total assets, as per books of the Company, . . . . \$345,180 38

#### LIABILITIES.

Capital stock, . . . . .	\$225,000 00
Notes payable, . . . . .	51,000 00
Unpaid bills, . . . . .	5,241 41
Deposits, . . . . .	159 00
Unpaid dividends, . . . . .	4,500 00
Reserved fund, . . . . .	41,949 46
Insurance fund, . . . . .	9,067 96
Amounts due from the Company, not included above, . . . . .	2,500 00

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Total liabilities, as per books of the Company, . . . \$339,417 83

Profit and loss balance, . . . . . 5,762 55

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\$345,180 38

### NEWBURYPORT GAS COMPANY.

#### ASSETS.

Real estate, . . . . .	\$1,132 43
Machinery and manufacturing appliances, . . . . .	75,000 00
Street mains, . . . . .	1,629 74
Meters, . . . . .	882 61
Cash on hand, . . . . .	810 24
Due for gas, . . . . .	2,272 70
Other accounts due the Company, . . . . .	776 76
Coal on hand, . . . . .	2,589 88
Coke on hand, . . . . .	24 00
Tar on hand, . . . . .	34 00
Enrichers on hand, . . . . .	7 20
Purifying materials on hand, . . . . .	44 25
Other materials on hand, . . . . .	161 50
Stoves on hand, . . . . .	10 00
Fixtures on hand, . . . . .	110 00
Notes receivable, . . . . .	5,318 75

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Total assets, as per books of the Company, . . . . \$90,804 06

## LIABILITIES.

Capital stock, . . . . .	\$80,000 00
Unpaid dividends, . . . . .	166 50
Total liabilities, as per books of the Company, . . .	\$80,166 50
Profit and loss balance, . . . . .	10,637 56
	<hr/>
	\$90,804 06

## NEWTON AND WATERTOWN GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters,		
Cash on hand, . . . . .		15,780 67
Due for gas, . . . . .		16,343 19
Other accounts due the Company, . . . . .		2,177 80
Coal on hand, . . . . .		1,514 13
Coke on hand, . . . . .		137 50
Tar on hand, . . . . .		300 00
Enrichers on hand, . . . . .		37 50
Purifying materials on hand, . . . . .		100 00
Other materials on hand, . . . . .		1,572 00
Stoves and fixtures on hand, . . . . .		1,372 56
Office furniture, . . . . .		371 75
Notes receivable, . . . . .		576 76
Investments, . . . . .		7,395 27
Total assets, as per books of the Company, . . .		<hr/>
		\$317,676 25

## LIABILITIES.

Capital stock, . . . . .	\$200,000 00
Deposits, . . . . .	25 00
Unpaid dividends, . . . . .	464 00
Contingent account, . . . . .	25,000 00
Total liabilities, as per books of the Company, . . .	\$225,489 00
Profit and loss balance, . . . . .	92,187 25
	<hr/>
	\$317,676 25

## NORTH ADAMS GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	
Machinery and manufacturing appliances,		
Street mains,		
Meters, . . . . .		
Cash on hand, . . . . .		3,713 00
		4,031 57

Due for gas, . . . . .	\$2,026 61
Coke on hand, . . . . .	72 00
Tar on hand, . . . . .	242 50
Other materials on hand, . . . . .	100 00
Stoves and fixtures on hand, . . . . .	1,884 65
Horses, wagons, etc., . . . . .	601 75
Office furniture, . . . . .	719 75
Investments, . . . . .	2,000 00

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Total assets, as per books of the Company, . . . \$65,391 83

#### LIABILITIES.

Capital stock, . . . . .	\$50,000 00
Notes payable, . . . . .	4,000 00

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Total liabilities, as per books of the Company, . . \$54,000 00

Profit and loss balance, . . . . . 11,391 83

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\$65,391 83

### NORTHAMPTON GAS LIGHT COMPANY.

#### ASSETS.

Real estate, . . . . .	\$30,000 00
Machinery and manufacturing appliances, . . . . .	3,000 00
Street mains, . . . . .	20,000 00
Construction, . . . . .	743 33
Cash on hand, . . . . .	5,864 00
Accounts due the Company, . . . . .	271 76
Coke on hand, . . . . .	24 00
Tar on hand, . . . . .	100 00
Enrichers on hand, . . . . .	155 30
Purifying materials on hand, . . . . .	86 58
Other materials on hand, . . . . .	840 33
Lamps on hand, . . . . .	69 80
Investments, . . . . .	3,250 00

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Total assets, as per books of the Company, . . . \$64,405 10

#### LIABILITIES.

Capital stock, . . . . .	\$50,000 00
Unpaid bills, . . . . .	64 40
Reserved fund, . . . . .	5,418 50

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Total liabilities, as per books of the Company, . . \$55,482 90

Profit and loss balance, . . . . . 8,922 20

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\$64,405 10

## NORTH ATTLEBOROUGH GAS LIGHT COMPANY.

ASSETS.	
Real estate, . . . . .	\$47,474 72
Machinery and manufacturing appliances, . . . . .	28,550 20
Street mains, . . . . .	40,064 81
Meters, . . . . .	5,183 98
Cash on hand, . . . . .	1,842 28
Due for gas, . . . . .	1,355 40
Other accounts due the Company, . . . . .	287 31
Coal on hand, . . . . .	4,511 66
Coke on hand, . . . . .	14 46
Tar on hand, . . . . .	141 13
Enrichers on hand, . . . . .	6 49
Purifying materials on hand, . . . . .	90 00
Other materials on hand, . . . . .	36 72
Stoves on hand, . . . . .	263 46
Fixtures on hand, . . . . .	1,379 35
Office furniture, . . . . .	350 00
Notes receivable, . . . . .	18,000 00
<hr/>	
Total assets, as per books of the Company, . . . . .	\$149,551 97

LIABILITIES.	
Capital stock, . . . . .	\$68,100 00
Bonds issued (dividend scrip), . . . . .	68,100 00
Unpaid bills, . . . . .	101 17
Unpaid dividends, . . . . .	2,043 00
Interest due, but not paid, . . . . .	1,021 50
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$139,365 67
Profit and loss balance, . . . . .	10,186 30
<hr/>	
	\$149,551 97

## NORWOOD GAS LIGHT COMPANY.

ASSETS.	
Real estate, . . . . .	\$3,000 00
Machinery and manufacturing appliances, } . . . . .	6,400 00
Street mains, }	
Meters, . . . . .	639 65
LIABILITIES.	
Capital stock, . . . . .	\$12,000 00
Balance Sheet as returned.	

## PITTSFIELD COAL-GAS COMPANY.

ASSETS.	
Real estate, . . . . .	\$22,500 00
Machinery and manufacturing appliances, . . . . .	14,350 00



Street mains, . . . . .	\$19,110 00
Meters, . . . . .	6,540 00
Cash on hand, . . . . .	12,413 50
Due for gas, . . . . .	3,201 44
Coal on hand, . . . . .	793 50
Coke on hand, . . . . .	70 00
Enrichers on hand, . . . . .	1,300 00
Purifying materials on hand, . . . . .	100 00
Notes receivable, . . . . .	27,071 25
Investments, . . . . .	3,550 00

Total assets, as per books of the Company, . . . \$110,999 69

## LIABILITIES.

Capital stock, . . . . .	\$62,500 00
Unpaid bills, . . . . .	2,000 00
Reserved fund, . . . . .	40,000 00

Total liabilities, as per books of the Company, . . . \$104,500 00

Profit and loss balance, . . . . . 6,499 69

\$110,999 69

## PLYMOUTH GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	. . . \$40,000 00
Machinery and manufacturing appliances,		
Street mains,		
Meters,		
Cash on hand, . . . . .		167 26
Due for gas, . . . . .		1,401 43
Other accounts due the Company, . . . . .		561 73
Coal on hand, . . . . .		642 56
Coke on hand, . . . . .		38 25
Tar on hand, . . . . .		30 00
Enrichers on hand, . . . . .		78 06
Other materials on hand, . . . . .		474 41
Stoves on hand, . . . . .		28 72
Fixtures on hand, . . . . .		837 44
Investments, . . . . .		2,500 00

Total assets, as per books of the Company, . . . \$46,759 86

## LIABILITIES.

Capital stock, . . . . .	\$40,000 00
Unpaid bills, . . . . .	575 54
Unpaid dividends, . . . . .	48 00
Amounts due from the Company, not included above, . . . . .	75 71

Total liabilities, as per books of the Company, . . . \$40,699 25

Profit and loss balance (if surplus), . . . . . 6,060 61

\$46,759 86

## ROXBURY GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$116,365 91
Machinery and manufacturing appliances, . . . . .	293,266 45
Street mains, . . . . .	228,321 92
Meters, . . . . .	47,506 96
Cash on hand, . . . . .	31,700 44
Due for gas, . . . . .	26,275 97
Other accounts due the Company, . . . . .	1,298 70
Coal on hand, . . . . .	12,368 90
Enrichers on hand, . . . . .	224 25
Purifying materials on hand, . . . . .	800 00
Other materials on hand, . . . . .	5,286 70
Notes receivable, . . . . .	198,000 00

Total assets, as per books of the Company, . . . \$961,416 20

## LIABILITIES.

Capital stock, . . . . .	\$600,000 00
Unpaid bills, . . . . .	1,074 63
Deposits, . . . . .	2,551 00
Reserved fund, . . . . .	115,000 00

Total liabilities, as per books of the Company, . . \$718,625 63  
 Profit and loss balance, . . . . . 242,790 57

\$961,416 20

## SALEM GAS LIGHT COMPANY.

## ASSETS.

Real estate,	}	. . .	\$253,085 72
Machinery and manufacturing appliances,			
Street mains,			
Meters,			
Cash on hand, . . . . .			80,673 46
Due for gas, . . . . .			10,419 08
Other accounts due the Company, . . . . .			8,302 84
Coal on hand, . . . . .			5,796 07
Tar on hand, . . . . .			2,000 00
Enrichers on hand, . . . . .			1,139 57
Purifying materials on hand, . . . . .			800 00
Other materials on hand, . . . . .			2,810 65
Horses, wagons, etc., . . . . .			850 00
Office furniture, . . . . .			200 00
Notes receivable, . . . . .			8,000 00
Investments, . . . . .			17,420 49

Total assets, as per books of the Company, . . \$391,497 88

## LIABILITIES.

Capital stock, . . . . .	\$300,000 00
Deposits, . . . . .	385 00
Depreciation fund, . . . . .	19,464 76
Amounts due from the Company, not included above, . . . . .	2,780 00

Total liabilities, as per books of the Company, . . . . .	\$322,629 76
Profit and loss balance, . . . . .	68,868 12
	<hr/> \$391,497 88

## SOUTH BOSTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$200,909 76
Machinery and manufacturing appliances, } . . . . .	235,754 70
Street mains, . . . . .	
Meters, . . . . .	16,171 87
Cash on hand, . . . . .	2,118 00
Due for gas, . . . . .	10,477 63
Other accounts due the Company, . . . . .	1,227 90
Coal on hand, . . . . .	14,532 91
Enrichers on hand, . . . . .	104 89
Purifying materials on hand, . . . . .	553 00
Other materials on hand, . . . . .	487 60
Stoves on hand, . . . . .	520 03
Horses, wagons, etc., . . . . .	1,200 00
Office furniture, . . . . .	238 85
Investments, . . . . .	26,000 00

Total assets, as per books of the Company, . . . . .	\$510,297 14
--	--------------

## LIABILITIES.

Capital stock, . . . . .	\$440,000 00
Notes payable, . . . . .	20,000 00
Unpaid bills, . . . . .	1,580 83
Deposits, . . . . .	1,349 05
Unpaid dividends, . . . . .	17,600 00

Total liabilities, as per books of the Company, . . . . .	\$480,529 88
Profit and loss balance, . . . . .	29,767 26
	<hr/> \$510,297 14

## SPENCER GAS COMPANY.

## ASSETS.

Real estate, . . . . .	\$20,478 78
Machinery and manufacturing appliances, . . . . .	68,371 03
Street mains, . . . . .	28,000 00

Meters, . . . . .	\$1,673 40
Cash on hand, . . . . .	8,476 79
Due for gas, . . . . .	2,418 75
Other accounts due the Company, . . . . .	2,043 68
Coke on hand, . . . . .	50 00
Tar on hand, . . . . .	20 00
Enrichers on hand, . . . . .	27 50
Purifying materials on hand, . . . . .	5 00
Other materials on hand, . . . . .	2,748 17
Stoves on hand, . . . . .	150 00
Fixtures on hand, . . . . .	1,251 59
Office furniture, . . . . .	50 00
Electric light plant, . . . . .	23,000 00

Total assets, as per books of the Company, . . . \$158,794 69

#### LIABILITIES.

Capital stock, . . . . .	\$75,000 00
Bonds issued, . . . . .	75,000 00

Total liabilities, as per books of the Company, . . \$150,000 00  
 Profit and loss balance, . . . . . 8,794 69

\$158,794 69

### SPRINGFIELD GAS LIGHT COMPANY.

#### ASSETS.

Real estate, . . . . .	\$84,385 07
Machinery and manufacturing appliances, . . . . .	230,176 83
Street mains and services, . . . . .	173,261 69
Meters, . . . . .	25,295 35
Extension account, work in process, . . . . .	25,140 95
Cash on hand, . . . . .	24,180 32
Due for gas, . . . . .	4,207 25
Other accounts due the Company, . . . . .	5,699 33
Coal on hand, . . . . .	10,089 67
Enrichers on hand, . . . . .	875 11
Purifying materials on hand, . . . . .	182 32
Other materials on hand, . . . . .	7,867 66
Stoves on hand, . . . . .	651 07
Gas-engines and burners on hand, . . . . .	1,416 42
Horses, wagons, etc., . . . . .	2,200 00
Office furniture, . . . . .	1,275 00
Notes receivable, . . . . .	1,601 44
Steam heating, . . . . .	63,695 92

Total assets, as per books of the Company. . . . \$662,201 40

## LIABILITIES.

Capital stock, . . . . .	\$500,000 00
Unpaid bills, . . . . .	1,503 05
Deposits, . . . . .	611 00
Unpaid dividends, . . . . .	2,015 00
Steam heating, . . . . .	31,243 42
<hr/>	
Total liabilities, as per books of the Company, . . .	\$535,372 47
Profit and loss balance, . . . . .	126,828 93
<hr/>	
	\$662,201 40

## TAUNTON GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$26,500 00
Machinery and manufacturing appliances, . . . . .	52,477 38
Cash on hand, . . . . .	8,940 22
Due for gas, . . . . .	7,186 14
Other accounts due the Company, . . . . .	2,181 84
Coal on hand, . . . . .	794 00
Coke on hand, . . . . .	14 00
Tar on hand, . . . . .	750 00
Enrichers on hand, . . . . .	4 41
Purifying materials on hand, . . . . .	489 00
Other materials on hand, . . . . .	245 05
Stoves on hand, . . . . .	1,646 43
Fixtures on hand, . . . . .	3,428 93
<hr/>	
Total assets, as per books of the Company, . . . . .	\$104,657 40

## LIABILITIES.

Capital stock, . . . . .	\$80,000 00
Deposits, . . . . .	98 00
<hr/>	
Total liabilities, as per books of the Company, . . .	\$80,098 00
Profit and loss balance, . . . . .	24,559 40
<hr/>	
	\$104,657 40

## WALTHAM GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$19,162 97
Machinery and manufacturing appliances, . . . . .	80,517 98
Street mains, . . . . .	41,039 83
Meters, . . . . .	4,845 07

Cash on hand, . . . . .	\$3,939 53
Due for gas, . . . . .	5,472 40
Other accounts due the Company, . . . . .	924 98
Coal on hand, . . . . .	1,409 80
Coke on hand, . . . . .	162 50
Tar on hand, . . . . .	612 50
Enrichers on hand, . . . . .	29 12
Purifying materials on hand, . . . . .	171 00
Other materials on hand, . . . . .	458 46
Stoves on hand, . . . . .	149 92
Fixtures on hand, . . . . .	930 11
Horses, wagons, etc., . . . . .	1,132 70
Office furniture, . . . . .	744 63
Electric light plant, . . . . .	29,732 08
<hr/>	
Total assets, as per books of the Company, . . . . .	\$191,435 58

## LIABILITIES.

Capital stock, . . . . .	\$140,000 00
Bonds issued, . . . . .	20,000 00
Notes payable, . . . . .	10,000 00
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$170,000 00
Profit and loss balance, . . . . .	21,435 58
<hr/>	
	\$191,435 58

## WESTFIELD GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$2,430 00
Machinery and manufacturing appliances, . . . . .	29,642 02
Street mains, . . . . .	14,529 26
Meters, . . . . .	1,075 05
Cash on hand, . . . . .	2,319 25
Due for gas, . . . . .	2,509 15
Coal on hand, . . . . .	2,334 93
Enrichers on hand, . . . . .	210 01
Fixtures on hand, . . . . .	20 60
Notes receivable, . . . . .	86 24
Investments, . . . . .	3,120 00
<hr/>	
Total assets, as per books of the Company, . . . . .	\$58,276 51

## LIABILITIES.

Capital stock, . . . . .	\$54,000 00
<hr/>	
Total liabilities, as per books of the Company, . . . . .	\$54,000 00
Profit and loss balance, . . . . .	4,276 51
<hr/>	
	\$58,276 51

## WOBBURN GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$9,706 17
Machinery and manufacturing appliances, . . . . .	30,619 40
Street mains, . . . . .	24,414 21
Meters, . . . . .	2,767 86
Cash on hand, . . . . .	6,720 38
Due for gas, . . . . .	2,033 73
Other accounts due the Company, . . . . .	309 35
Coal on hand, . . . . .	196 80
Tar on hand, . . . . .	62 50
Enrichers on hand, . . . . .	121 92
Purifying materials on hand, . . . . .	100 00
Other materials on hand, . . . . .	125 00
Rented lamps, . . . . .	264 50
Notes receivable, . . . . .	7,500 00

Total assets, as per books of the Company, . . . . . \$84,941 82

## LIABILITIES.

Capital stock, . . . . . \$45,100 00

Total liabilities, as per books of the Company, . . . . . \$45,100 00

Profit and loss balance, . . . . . 39,841 82

\$84,941 82

## WORCESTER GAS LIGHT COMPANY.

## ASSETS.

Real estate, . . . . .	\$126,000 00
Machinery and manufacturing appliances, . . . . .	183,008 79
Street mains, . . . . .	220,897 85
Meters, . . . . .	11,514 98
Cash on hand, . . . . .	26,598 27
Due for gas, . . . . .	1,030 80
Coal on hand, . . . . .	6,712 13
Coke on hand, . . . . .	187 50
Tar on hand, . . . . .	2,100 00
Enrichers on hand, . . . . .	355 00
Stoves and fixtures on hand, . . . . .	25 00
Investments, . . . . .	38,395 82

Total assets, as per books of the Company, . . . . . \$616,826 14

## LIABILITIES.

Capital stock, . . . . .	\$500,000 00
Unpaid dividends, . . . . .	10,485 00
Depreciation fund, . . . . .	63,558 48
<hr/>	
Total liabilities, as per books of the Company, . . .	\$574,043 48
Profit and loss balance, . . . . .	42,782 66
<hr/>	
	\$616,826 14



## APPENDIX B.

## COMMONWEALTH OF MASSACHUSETTS.

OFFICE OF THE BOARD OF GAS COMMISSIONERS,  
No. 13 BEACON STREET,

BOSTON, June 15, 1887.

*To the Presidents and Directors of the several Gas Companies in the Commonwealth.\**

These blanks for the Annual Returns are sent in duplicate, one to be filled out, sworn to, and returned to this Board on or before *September 14, 1887*. On the other blank, a copy of the return should be made and retained by the Company for future reference. The returns are for the year ending June 30, 1887.

The returns should be made in accordance with the General Instructions regarding books and accounts, and especial attention should be given to Expenses, Income and Balance Sheet, which must be an exact transcript from the books of the Company at the close of business June 30, 1887.

*Read carefully the various explanatory foot-notes.*

When, from any cause, it is not possible to answer any particular question, the space designed for the answer should be filled with a dash (—) to indicate that the question has not been overlooked.

Manufacturing and other companies engaged in the manufacture of gas for sale, in connection with their other business, will estimate the value of their gas plant (when not already separated on their books) and answer all other questions fully.

Although special questions (see pages 21 and 22) have been arranged for companies making oil or water gas, those companies

are, nevertheless, expected to answer as many of the other questions as the nature of the business will admit.

Any inquiries, or other communications in relation to the returns, should be addressed to A. B. COFFIN, Chairman of the Board, at this office.

Per order of the Board of Gas Commissioners.

WALTER S. ALLEN, *Clerk*.

# RETURN OF THE COMPANY TO THE BOARD OF GAS COMMISSIONERS OF MASSACHUSETTS,

FOR THE YEAR ENDING JUNE 30, 1887.

Please give full corporate title of company,  
Location of principal business office,  
Names of the cities or towns supplied with gas by the company with  
number of consumers' meters in each place,

## LIST OF SALARIED OFFICERS.

NAME.	Official Position.	Annual Salary.

## SCHEDULE A.

CAPITAL, DEBTS, COST OF PLANT JUNE 30, 1887.

### CAPITAL.

1. Capital authorized by charter, . . . . \$
2. Capital authorized by votes of company, . . . .
3. Capital paid in:

shares, par value, \$ . . . .

Whole number of stockholders,

Number of stockholders resident in Massachusetts,

Amount of stock held in Massachusetts, shares.

### DEBTS.

4. Bonds or notes issued, viz. :

Date.	When Due.	How Secured.	Rate of Interest.	Amount.

5. Total amount of bonds and notes, . . . . .	\$
6. Other permanent debts, if any,*. . . . .	
7. Capital paid in (as per item 3), . . . . .	
8. Total liability for capital and loans, . . . . .	\$

## COST OF PLANT.

(As the accounts stand on the books of the Company at close of business June 30, 1887.)

9. Cost of real estate, . . . . .	\$
10. Cost of machinery, apparatus, and other appliances used in the manufacture of gas, . . . . .	
11. Cost of street mains, . . . . .	
12. Cost of meters, . . . . .	
13. Cost and description of other permanent works, if any, . . . . .	
14. Total cost of plant, as per books of the company June 30, 1887, . . . . .	\$
15. Amount (if any) charged to construction during the year, \$	

## COMPARISON OF VALUES.

16. Value of real estate, as assessed in the city or town where located, . . . . .	\$
17. Value of machinery and apparatus, as assessed in the city or town where located, . . . . .	
18. Value of any other property, as assessed in the city or town where located, . . . . .	
19. Total value of plant, as assessed by local assessors, . . . \$	
Total cost, as per item 14, . . . . .	
20. Excess of † value, over † value, \$	
Total cost of plant, as per item 14, . . . . .	\$
Amount of capital and loans, as per item 8, . . . . .	
21. Cost of plant ‡ than capital and loans, . . . . .	\$

\* This should not include deposits, unpaid interest, dividends, amounts due or notes given for coals or other supplies.

† This blank to be filled with the word "assessed" or "cost" as required.

‡ This blank to be filled with the word "more" or "less" as required.

SCHEDULE B.  
STATEMENT OF INCOME AND EXPENSES FOR THE YEAR ENDING JUNE 30, 1887.

EXPENSES.		INCOME.	
FOR MANUFACTURE OF GAS:		FROM SALE OF GAS:	
1. Coals (other than those used for enriching) including all expenses of depositing at works, . . . . .	\$	1. Supplied by meter, — feet @ \$ . . . . .	\$
2. Enrichers, . . . . .		2. For public lamps, estimated feet @ . . . . .	
3. Purifying materials, . . . . .		3. Under contracts, estimated feet @ . . . . .	
4. Water, . . . . .			
5. Wages at works, . . . . .		4. Total from sale of gas, . . . . .	
6. Repairs and maintenance of works (including renewal of retorts), . . . . .		FROM RESIDUAL PRODUCTS:	
7. Apparatus and machinery, . . . . .		5. Coke, bushels, . . . . .	
Less old material sold, . . . . .		6. Tar, gallons, . . . . .	
FOR DISTRIBUTION OF GAS:		7. Ammoniacal liquor, . . . . .	
8. Wages of meter-takers, clerical labor in this department, and salary or commission of collectors, . . . . .		8. Total from residuals, . . . . .	
9. Repairs, renewals and maintenance of mains and service pipes, . . . . .		FROM OTHER SOURCES, VIZ.:	
10. Repairs and renewals of meters, . . . . .		9. Rent of meters, . . . . .	
Less old material sold, . . . . .		10. Rent of gas stoves and engines, . . . . .	
FOR PUBLIC LAMPS:		11. Rent of gas lamps, . . . . .	
11. Lighting and repairing (gas lamps only), . . . . .		12. Public lamps other than gas lamps, . . . . .	
12. Lighting and repairing, and materials used for other lamps, . . . . .		13.†	
FOR OFFICE EXPENSES AND MANAGEMENT:		14.	
13. Directors' allowances, . . . . .		15.	
14. Salaries of officers, . . . . .			
15. General salaries, . . . . .			
16. Rent of offices, . . . . .			
17. General office expenses, . . . . .			
FOR MISCELLANEOUS EXPENSES:			
18. Taxes, . . . . .	\$		
19. Fire insurance, . . . . .			
20. Law expenses, . . . . .			
21. Claims, . . . . .			
22. Bad debts, . . . . .			
23. Incidental expenses,* viz.:			
a			
b			
c			
24. Total expenses, . . . . .		16. Total receipts, . . . . .	
25. Balance to profit and loss, . . . . .			

\* To include only such items of expenses attending the manufacture and sale of gas as are not already given.

† Such items of income arising only from the manufacture and sale of gas as are not included above.

SCHEDULE C.  
PROFIT AND LOSS ACCOUNT, JUNE 30, 1887.

Dr.	\$	\$	\$	Cr.
For balance from last account (if any), interest on bonds, loans and deposits, dividends declared on stock, viz.: per cent. due, . . . . . per cent. due, . . . . . other items (giving particulars), viz.: amount carried to reserved fund, . " depreciation fund, . . . . . total amount at debit, . . . . . balance (if surplus), . . . . .	.	.	.	By balance from last account (if any), balance of income as per item 2, Schedule B, interest received on loans or deposits, . rents, . . . . . other items (giving particulars), viz.: . Total amount at credit, . . . . . By balance (if deficit), . . . . .
	\$	\$	\$	\$

SCHEDULE D.  
RESERVED FUND ACCOUNT.

Dr.	\$	\$	Cr.
4. For * . . . . .	.	.	\$
5. Balance June 30, 1887, . . . . .	.	.	1. By balance of account June 30, 1886, income during the year from amount invested, . amount transferred from Profit and Loss account, .
6. How is fund invested?	.	.	\$

SCHEDULE E.  
DEPRECIATION FUND ACCOUNT.

Dr.	\$	\$	Cr.
For * . . . . .	.	.	\$
For balance June 30, 1887, . . . . .	.	.	By balance of account June 30, 1886, amount transferred from Profit and Loss account, .
How is fund invested?	.	.	\$

\* Any sums charged to this account during the year ending June 30, 1887, stating the purpose for which the same were used.

SCHEDULE F.  
BALANCE SHEET, JUNE 30, 1887.

From Return of 1886.	ASSETS.		From Return of 1886.	LIABILITIES.	
\$	Real estate, . . . . .	\$		Capital stock, . . . . .	\$
	Machinery and manufacturing appliances, . . . . .			Bonds issued, . . . . .	
	Street mains, . . . . .			Notes payable,† . . . . .	
	Meters, . . . . .			Unpaid bills, . . . . .	
	Cash on hand, . . . . .			Deposits, . . . . .	
	Due for gas, . . . . .			Unpaid dividends, . . . . .	
	Other accounts due the company, . . . . .			Interest due but not paid, . . . . .	
	Coal on hand, . . . . .			Reserved fund, . . . . .	
	Coke on hand, . . . . .			Depreciation fund, . . . . .	
	Tar on hand, . . . . .			Amounts due from the company, not included	
	Enrichers on hand, . . . . .			above, . . . . .	
	Purifying materials on hand, . . . . .				
	Other materials on hand, . . . . .				
	Stoves on hand, . . . . .				
	Fixtures on hand, . . . . .				
	Horses, wagons, etc., . . . . .				
	Office furniture, . . . . .				
	Notes receivable, . . . . .				
	Investments* (giving particulars thereof), . . . . .				
	Total assets, as per books of the company, . . . . .	\$		Total liabilities, as per books of the company, . . . . .	\$
	Profit and Loss balance (if deficit), . . . . .	\$		Profit and Loss balance (if surplus), . . . . .	\$

\* Including any real estate so held.

† State whether secured by mortgage or not.

## GENERAL INFORMATION.

Location of works,

Area of land occupied by the company,

Number of retorts viz. :

benches of 1 each.

benches of 2 each.

benches of 3 each.

benches of 4 each.

benches of 5 each.

benches of 6 each.

benches of 7 each.

benches of 8 each.

Number of benches rebuilt during the last year,

How long were such benches in actual use ?

Average total production of gas per retort in such benches,

Average number of retorts employed from October to March, inclusive,

Average number of retorts employed the remainder of the year,

Materials used in purifiers,

Total amount of lime used during the year, bushels.

Average cost of same per bushel, cents.

Quantity of gas purified per bushel of lime,

Cost per bushel of iron sponge purchased during the year, cents.

Estimated total cost for the year of iron sponge used, \$

Estimated quantity of gas purified by iron sponge,

Sizes of street mains, and lengths of each size in feet, viz. :

Sizes — Diameters.	Total Length June 30, 1886.	Taken up Since.	Laid Since.	Total Length June 30, 1887.
1 inch, . .				
1½ " . .				
1½ " . .				
2 " . .				
3 " . .				
4 " . .				
6 " . .				
8 " . .				
10 " . .				
12 " . .				
14 " . .				
16 " . .				
18 " . .				
20 " . .				
24 " . .				
30 " . .				
Totals, .				



Estimated capacity of works per diem,

Number of feet of gas made during the year,

“ “ “ sold by meter during the year,

“ “ “ supplied to public lamps during the year,

“ “ “ used at works and offices during the year,

“ “ “ used in the mills of the company\* during the year,

“ “ “ unaccounted for during the year,

Greatest out-put in 24 hours,

Date of same,

Least out-put in 24 hours,

Date of same,

Capacity of meters and number of each size in use, viz. :

Size. No. of Lights.	Number in Use June 30, 1886.	Removed Since.	Added Since.	Number in Use June 30, 1887.
1, . . .				
2, . . .				
3, . . .				
5, . . .				
10, . . .				
20, . . .				
30, . . .				
35, . . .				
40, . . .				
45, . . .				
50, . . .				
60, . . .				
80, . . .				
100, . . .				
125, . . .				
150, . . .				
180, . . .				
200, . . .				
250, . . .				
300, . . .				
400, . . .				
500, . . .				
Totals, .				

Is any meter rent charged, and what is the rule governing such charge?

Number of gas stoves used by consumers during the year,

Number of Lungren or other high-power lamps used by consumers during the year,

Number of lamps leased by company,

Rental price of same per lamp,

Number of gas engines used by consumers during the year,

Number of gas engines leased by company,

Rental price of same,

Usual day pressure on street mains, as indicated at works,

Usual night pressure on street mains, as indicated at works,

Average candle power of the gas burning at the rate of five feet per hour.

Kind of burner used in making the test,

Gross price per 1,000 feet at the close of the year, \$

Are discounts allowed, and if so, how are they made?

\* This question will only require an answer from companies engaged in other manufactures.

What changes have been made in price or discounts during the year, and when made ?

Number of public gas lamps supplied at close of year,

Price for public gas lamps,

Estimated hourly consumption of each lamp,                      cubic feet.

Estimated number of hours during the year that lamps are lighted,

Kind of burner principally used on public lamps,

Number of public lamps other than gas lamps maintained by the company,

Pounds of coal carbonized (not including any used as an enricher),

Kinds of coal carbonized,

Proportions of each, if used together,

Average cost of same per ton of 2,240 lbs., delivered at works, \$

Statement of coals for year ending June 30, 1887 :—

	On hand June 30, 1886.	Received during the Year.	Used during the Year.	On hand June 30, 1887.
	Tons.	Tons.	Tons.	Tons.
Enriching coals, . . .				
Other coals, . . .				

What materials were used for enriching the gas ?

Amount of each per ton of coal carbonized,

Average cost of same delivered at the works, viz. :

Cannel coal, \$                      per ton (2,240 lbs.) ; amount used,                      tons.

Naphtha,        \$                      per gallon ; amount used,                      galls. . . .

\$                      per                      ; amount used,                      . . . .

\$                      per                      ; amount used,                      . . . .

Statement of residual products for year ending June 30, 1887 :—

	On hand June 30, 1886, Estimated.	Made during the year, Estimated.	Used during the year, Estimated.	Sold During the year.	On hand June 30, 1887, Estimated.
Coke,                      bushels.					
Tar,                      gallons.					
Ammoniacal liquor, gallons.					

Prices now obtained for residuals :—

Tar per gallon,                      . . . . . \$

Coke per bushel,                      . . . . . \$

Ammoniacal liquor per                      . . . . . \$

Average number of men employed, viz. :—

	Foremen.	Stokers.	Other men.
April to September, inclusive, .			
October to March, inclusive, .			

Average wages of men employed, viz. :—

Number of Men.	How Employed.	Average Wages per Month.

What additions, alterations or improvements not already stated, have been made to or in the property of the Company since the last return ?

What experiments or changes in methods of manufacture has the Company made since its last return ?

ONLY THOSE COMPANIES MAKING "WATER GAS" ARE TO ANSWER THE  
QUESTIONS ON THIS PAGE.

What patent process, if any, is used in the manufacture of gas ?

How long has such process been employed ?

Is said process used alone or as an auxiliary to the making of coal gas ?

If used as an auxiliary, how often is it so used and how long each time ?

At what point in the works is the gas so made mixed with the coal gas ?

Total amount of water gas made during the year,

What kind of fuel is used for *generating the gas* ?

Amount so used,

Cost of same per ton of 2,240 lbs., delivered at works, \$

What kind of fuel is used for *generating the steam* ?

Amount so used,

Cost of same per ton of 2,240 lbs., delivered at works, \$

Number of gallons of naphtha used,

Cost per gallon, cents.

Gas produced per gallon, cubic feet.

Number of gallons of petroleum used,

Cost per gallon, cents.

Gas produced per gallon, cubic feet.

Dimensions of generator,

" superheater,

" condenser or washer,

Usual length of runs,

Capacity of works per hour as observed in actual use,

ONLY THOSE COMPANIES MAKING "OIL GAS" ARE TO ANSWER THE  
QUESTIONS ON THIS PAGE.

What patent process, if any, is used in the manufacture of gas?

How long has such process been employed?

Number of gallons of naphtha used,

Average price per gallon, cents.

Number of gallons of petroleum used,

Average price per gallon, cents.

Number of gallons of other oils used,

Average price per gallon, cents.

Gas produced per gallon of naphtha, cubic feet.

" " petroleum, "

" " other oils, "

What amount of coal or other fuel was used?

Kind of coal or other fuel so used,

Cost of same per ton of 2,240 lbs., delivered at works, \$

What percentage of the gas in the holder is atmospheric air?

At what point in the works is the air mixed with the gas?

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NAME AND RESIDENCE OF OFFICERS.

*President,*  
*Vice-President,*  
*Manager,*  
*Superintendent,*  
*Treasurer,*  
*Clerk of the Corporation,*

---

NAME AND RESIDENCE OF DIRECTORS.

*President.*

*Treasurer.*

---

*Directors.*

COMMONWEALTH OF MASSACHUSETTS.

ss.

1887.

Then personally appeared

and severally made oath to the truth of the foregoing statement by them  
subscribed, according to their best knowledge and belief.

*Justice of the Peace.*

## APPENDIX C.

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[Chap. 332, Acts of 1887.]

## AN ACT

CONSTITUTING THE BOARD OF GAS COMMISSIONERS A  
BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS.

*Be it enacted, etc., as follows:*

SECTION 1. The board of gas commissioners shall have the general supervision of all companies engaged in the manufacture and sale of electric light, and shall make all necessary examinations and inquiries, and keep themselves informed as to the compliance of the said companies with the provisions of law.

SECT. 2. Sections seven, nine, twelve, thirteen and fourteen of chapter three hundred and fourteen of the acts of the year eighteen hundred and eighty-five, and sections one, two and five of chapter three hundred and forty-six of the acts of the year eighteen hundred and eighty-six, are hereby extended so as to include and apply to all companies engaged in the manufacture and sale of electric light: *provided, however*, that the first return of such companies shall include the period from the first day of July in the year eighteen hundred and eighty-seven to the thirtieth day of June in the year eighteen hundred and eighty-eight inclusive.

SECT. 3. In any city or town in which a company is engaged in or organized for the purpose of the manufacture and sale of electric light no other company shall lay or erect wires over or under the streets, lanes and highways of such city or town for the purpose of carrying on its business without the consent of the mayor and aldermen of such city or selectmen of a town after a public hearing and notice to all parties interested.

SECT. 4. Section six of chapter three hundred and fourteen of the acts of the year eighteen hundred and eighty-five is hereby amended so that the expenses therein named, incurred from and after July first, eighteen hundred and eighty-seven, shall be borne by the several gas and electric light companies as therein provided.

SECT. 5. Any company or person aggrieved by the decision of the mayor and aldermen of a city or selectmen of a town under the provisions of the third section of this act may appeal therefrom to said board within thirty days from the notice of said decision, and said board shall thereupon give due notice and hear all persons in interest, and its decision thereon shall be final.

SECT. 6. In the construction of this act the terms "company" and "companies" shall be deemed to include also all corporations or individuals engaged in the business of manufacturing and selling electric light within this Commonwealth.

SECT. 7. This act shall take effect upon its passage. [*Approved June 8, 1887.*]

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EXTRACT FROM CHAPTER 314, ACTS OF 1885.

SECT. 6. The annual expenses of the commissioners and clerk, including salaries, shall be borne by the several gas companies in proportion to their gross earnings, and shall be assessed and recovered in the manner provided for the assessment and recovery of the expenses of the railroad commissioners.

SECT. 7. Every gas company shall annually make a return to said board in a form and at a time prescribed by said board, setting forth the amount of its authorized capital, its indebtedness and financial condition on the first day of January preceeding, and a statement of its income and expenses during the preceeding year, together with its dividends paid or declared, and a list containing the names of all its salaried officers, and the amount of the annual salary paid to each; and said return shall be signed and sworn to by the president and treasurer of said company and a majority of its directors. Every such company shall also at all times on request furnish any statement or information required by the board concerning the condition, management and operations of the company, and shall comply with all lawful orders of said board.

SECT. 9. Upon the complaint in writing of the mayor of a city or the selectmen of a town in which a gas company is located, or of twenty customers of such company, either of the quality or price of the gas sold and delivered by such company, the board shall notify the company of such complaint by leaving at their office a copy thereof, and shall thereupon, after notice, give a public hearing to such petitioner and such company; and after said hearing may order, if they deem just and proper, any reduction in the price of gas or improvement in quality thereof; and they shall pass such orders and take such action as are necessary thereto, and a report of the proceedings and the result thereof shall be included in their annual report to the legislature.

SECT. 12. The board, whenever any such company violates or neglects in any respect to comply with the provisions of any law, or refuses or neglects to comply with any lawful order of the board, shall give notice thereof in writing to such corporation, and to the attorney-general, who shall take such proceedings thereon as he may deem expedient.

SECT. 13. Any court having jurisdiction in equity, in term time or vacation, may, on the application of said board, by any suitable process or decree in equity, enforce the provisions of this act and the lawful orders of said board.









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